City of Tacoma

Questions and Answers

Investment Consulting
RFP Specification No. **RE21-0767F**

All interested parties had the opportunity to submit questions in writing by email to Ryan Foster, Senior Buyer by December 17, 2021. The answers to the questions received are provided below and posted to the City's website at www.TacomaPurchasing.org: Navigate to *Current Contracting Opportunities* / *Services Solicitations*, and then click *Questions and Answers* for this Specification. This information IS NOT considered an addendum. Respondents should consider this information when submitting their proposals.

Question 1: Can you please provide the most recent quarterly materials that were provided by the current consultant to the Board?
Answer 1: ***The Q3 2021 TERS Executive Summary is attached below.***

Question 2: Per Section 12 of the RFP, all submittals are not to exceed 20 single-sided pages. Can you please confirm that the requested exhibits and samples are not part of the page limits?

Answer 2: ***We confirm that this limit excludes exhibits and samples.***

Question 3: Are all the meetings in-person?

Answer 3: ***Prior to the meeting all TERS Board meetings were held in-person and the investment consultants attended the quarterly meetings (Feb/May/Aug/Nov) in person. Beginning in April 2020, TERS Board meetings moved to an online format (Zoom). While we will eventually move back to an in-person format, the meetings currently remain in the online format.***

Question 4: Can you please advise how many full-time employees are dedicated to working on the System and plans for new hires or positions?

Answer 4: ***Current TERS staff includes one Retirement Director/Chief Investment Officer, one Deputy Chief Investment Officer, one Assistant Retirement Director, three Retirement Specialists and two Accountants. We anticipate hiring an Administrative Assistant in the first half of 2022.***

Question 5: Are there any strategic investment initiatives being planned for the next 12-18 months?

Answer 5: ***TERS is currently working to identify an additional private Real Assets mandate to fill out this strategic allocation. In addition, TERS will begin a targeted Request for Information search for a private core real estate assignment to replace our existing U.S. REIT mandate. Other initiatives are dependent on the outcome of this Request For Proposal.***

Question 6: What is the biggest issue the Board is currently facing?

Answer 6: ***Like many public pension plans, funded status and public equity market volatility are always among the top priorities for the TERS Board.***

Question 7: Is the System expecting to have an Asset Liability study completed in 2022? When was the last study conducted?

Answer 7: ***The timing of the next Asset Liability study for TERS is dependent on the outcome of this Request For Proposal.***

Question 8: How many manager searches have been conducted each year, over the last 3 years?

Answer 8: ***2021 – 1***
2020 – 1
2019 – 2

Question 9: Given the rather tight 20-page limit to respond to approximately 60 questions, are we able to omit the question text from our proposal and simply number our responses (i.e. A.1, A.2, etc.)?

Answer 9: **Yes, you may omit the question text from the proposal**

Question 10: Are you able to confirm the upcoming TERS meeting schedule for 2022? It appears to be on a "second Thursday of every month" schedule, but I would like to confirm that if possible – along with the months at which the Investment Consultant typically presents to the Board.

Answer 10: **We target the second Thursday of every month for Board meetings, and with limited exceptions this has historically been the case. Investment Consultants typically present quarterly results at the February, May, August, and November meetings.**

Question 11: Is there anything in particular that caused you to issue an RFP at this time?

Answer 11: **TERS believes it is best practice to periodically evaluate our current vendors against the competition. There was no event which precipitated this RFP.**

Question 12: Is there any service you would like to get from your consultant that you are not currently receiving, or that could be improved on?

Answer 12: **TERS is not aware of any service which is absent or lacking from our current consultant. However, a potential goal of this RFP is to highlight any such service.**

Question 13: Are you interested in taking a direct to fund approach or will you continue to invest in fund of funds?

Answer 13: **There are advantages to both manners of investment, and we would view the future format of investment as dependent on the outcome of this RFP.**

Question 14: Would a discretionary service offering be of interest?

Answer 14: **TERS is not considering OCIO solutions at this time**

Question 15: What are your current pain points?

Answer 15: **Like many public pension plans, funded status and public equity market volatility are always among the top priorities for the TERS Board.**

Question 16: What is your existing budget for an investment consultant?

Answer 16: **There is no explicit budget for an investment consultant.**

Question 17: How much do you pay in manager fees in a given year?

Answer 17: **Per the TERS 2020 Annual Report, we paid $7.6M in manager fees in 2020, and $7.1M in manager fees in 2019. Annual report is available here: TERS 2020 Annual Report.pdf (cityoftacoma.org)**

Wilshire

Tacoma Employees' Retirement System

Quarterly Investment Summary

September 30, 2021

Market Commentary

U.S. Equity

The U.S. stock market, represented by the FT Wilshire 5000 Index℠, was up 0.1% for the third quarter. A slim majority of the eleven sectors were in positive territory, with Financials (+2.6%) and Utilities (+1.2%) representing the best performing sectors. The worst performing sector this quarter was Materials (-4.6%). From a size perspective, large-cap outperformed small-cap. In fact, large-cap growth was the only U.S. segment in positive territory this quarter.

Consumer sentiment dropped dramatically during the third quarter, with the University of Michigan's Consumer Sentiment Index falling to its lowest point in almost a decade. The drop occurred with the August results and followed a six-month period when headline inflation surged 7.8% (annualized), the largest six-month increase in 30 years. Additionally, July brought a surge in Coronavirus infections as the highly contagious delta variant infected even vaccinated individuals. Finally, the August survey period coincided with the Taliban seizing control of Kabul, the capital city of Afghanistan, in less than a week's time.

Non-U.S. Equity

Economic conditions in the U.K. appear to be rapidly deteriorating. The Office for National Statistics said that the economy grew by just 0.1% in July, hampered by supply-chain issues and Covid-19 infections. At the same time, inflation has spiked, with consumer prices in the U.K. rising 3.2% in August. Emerging Markets experienced a meaningful drop this quarter, down -8.0%. The main sources of weakness were South Korea (-13.2%) and China (-18.1%).

Fixed Income

The U.S. Treasury yield curve was up, generally, during the quarter, with yields in the 3- to 10-year maturity range rising the most. The 10-year Treasury yield ended the quarter at 1.49%, up two basis points from June. The FOMC met twice , as scheduled, with no change to their overnight rate. Through the Fed's "dot plot," they are messaging that the current intent is for a 25 basis point increase in the overnight rate before the end of 2022. Their median forecast for year-end 2023 is for a Fed funds rate of 1.0%.

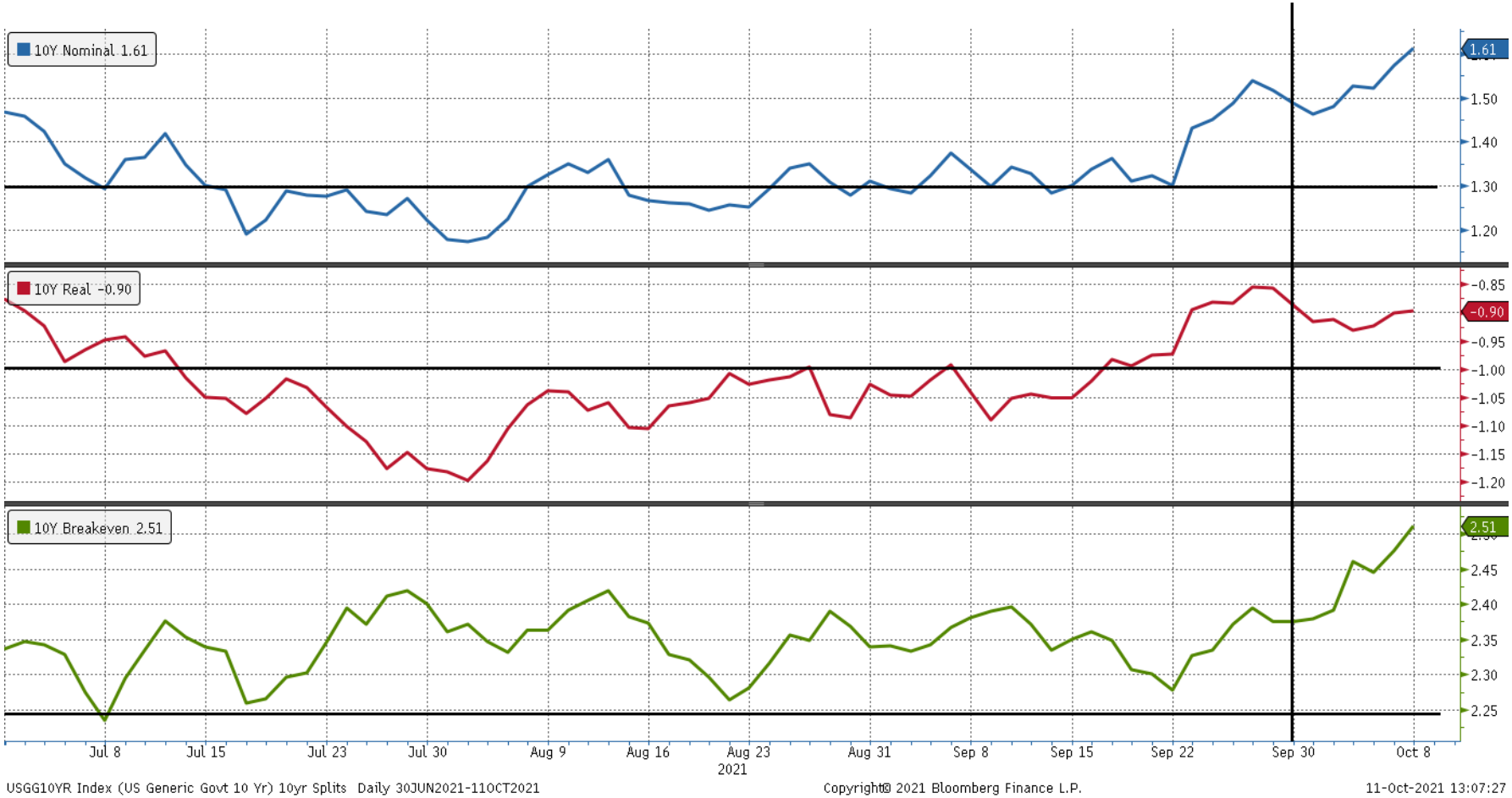
wilshire.com | ©2021 Wilshire Advisors LLC

September 2021 Asset Class Assumptions

	Equity						Fixed Income						Real Assets					
	U.S. Stock	Dev ex-U.S. Stock	Emg Mrkt Stock	Global ex-U.S. Stock	Global Stock	Private Equity	Cash	Core Bond	LT Core Bond	U.S. TIPS	High Yield	Non-U.S. Bond	U.S. Real Estate Secs	Global RE Secs	Private Real Estate	Cmdty	Real Assets	U.S. CPI
Compound Return (%)	5.00	6.00	6.00	6.25	5.65	8.40	1.55	1.85	2.35	1.55	3.60	0.75	4.75	4.90	6.35	4.05	5.85	2.50
Arithmetic Return (%)	6.35	7.50	9.00	7.90	7.00	11.75	1.55	1.95	2.75	1.75	4.10	0.85	6.10	6.05	7.25	5.10	6.35	2.50
Expected Risk (%)	17.00	18.00	26.00	19.15	17.15	28.00	0.75	4.30	8.85	6.00	10.00	4.30	17.00	15.85	14.00	15.00	10.15	1.75
Cash Yield (%)	1.30	2.50	2.00	2.35	1.75	0.00	1.55	3.00	3.40	2.30	7.50	1.80	2.85	2.85	2.30	1.55	1.95	0.00
Growth Expoure	8.00	8.00	8.00	8.00	8.00	13.50	0.00	-0.80	-2.10	-3.00	4.00	-1.00	6.00	6.00	3.50	0.00	1.80	0.00
Inflation Expoure	-3.00	0.00	5.00	1.55	-1.10	-3.80	0.00	-2.45	-6.55	2.50	-1.00	-3.00	1.00	1.95	1.00	12.00	4.90	1.00
Correlations																		
US Stock	1.00																	
Dev ex-US Stock (USD)	0.81	1.00																
Emerging Mkt Stock	0.74	0.74	1.00															
Global ex-US Stock	0.83	0.96	0.87	1.00														
Global Stock	0.95	0.92	0.83	0.94	1.00													
Private Equity	0.74	0.64	0.62	0.67	0.74	1.00												
Cash Equivalents	-0.05	-0.09	-0.05	-0.08	-0.07	0.00	1.00											
Core Bond	0.28	0.13	0.00	0.09	0.20	0.31	0.19	1.00										
LT Core Bond	0.31	0.16	0.01	0.12	0.23	0.32	0.11	0.92	1.00									
TIPS	-0.05	0.00	0.15	0.05	0.00	-0.03	0.20	0.59	0.47	1.00								
High Yield Bond	0.54	0.39	0.49	0.45	0.51	0.34	-0.10	0.25	0.32	0.05	1.00							
Dev ex-US Bond (Hdg)	0.16	0.25	-0.01	0.17	0.18	0.26	0.10	0.66	0.65	0.39	0.26	1.00						
US RE Securities	0.58	0.47	0.44	0.49	0.56	0.50	-0.05	0.17	0.23	0.10	0.56	0.05	1.00					
Global RE Securities	0.64	0.58	0.56	0.61	0.65	0.58	-0.05	0.17	0.22	0.11	0.61	0.03	0.96	1.00				
Private Real Estate	0.54	0.44	0.44	0.47	0.52	0.51	-0.05	0.19	0.25	0.09	0.57	0.05	0.77	0.75	1.00			
Commodities	0.25	0.34	0.39	0.38	0.32	0.27	0.00	-0.02	-0.02	0.25	0.29	-0.10	0.25	0.28	0.25	1.00		
Real Assets	0.48	0.51	0.58	0.57	0.54	0.47	-0.02	0.23	0.25	0.39	0.56	0.05	0.70	0.75	0.70	0.65	1.00	
Inflation (CPI)	-0.10	-0.15	-0.13	-0.15	-0.13	-0.10	0.10	-0.12	-0.12	0.15	-0.08	-0.08	0.05	0.03	0.05	0.44	0.26	1.00

©2021 Wilshire Advisors LLC

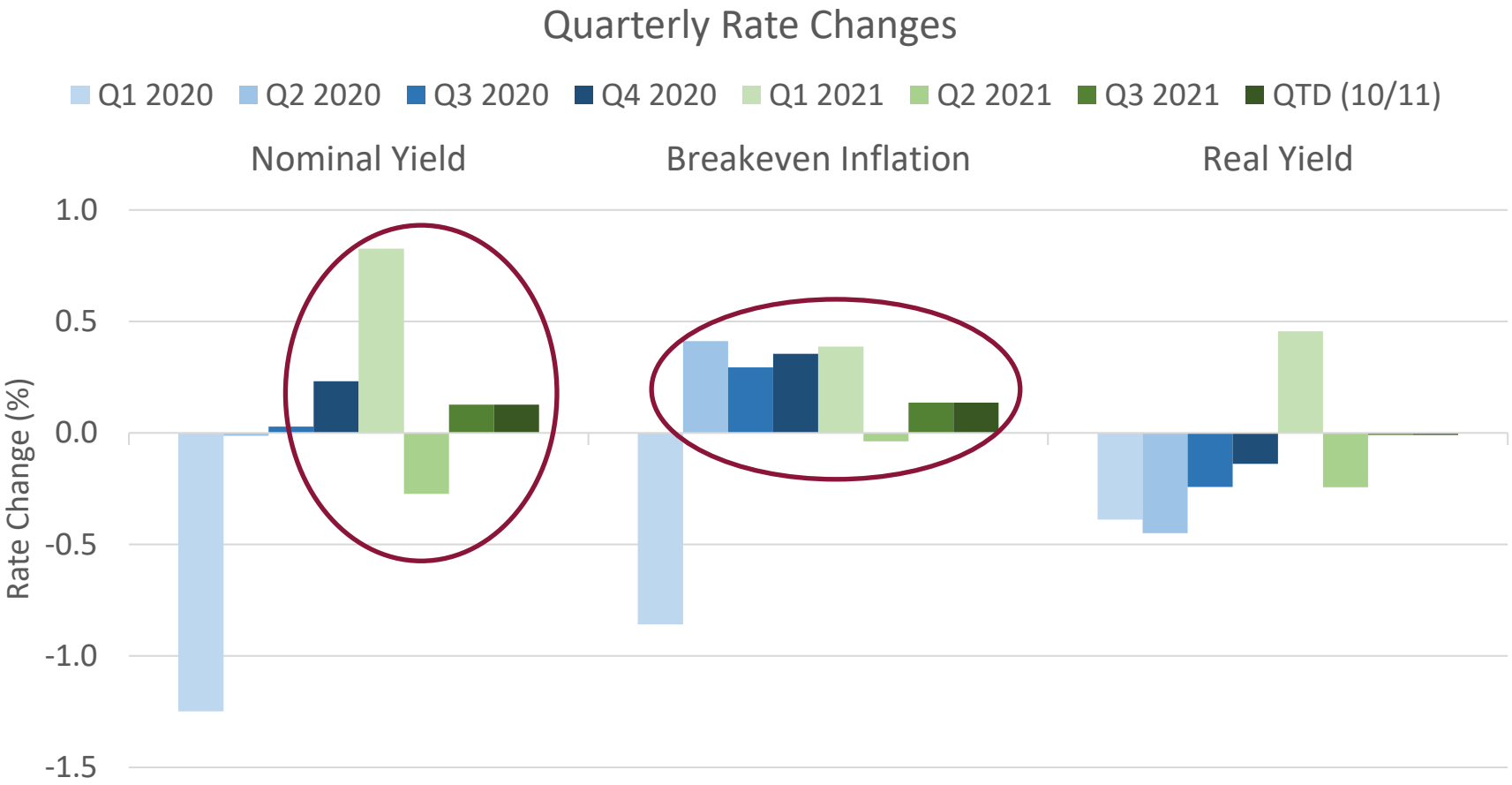
Rate Splits: Yield / Inflation Environment



Data Source: Bloomberg

wilshire.com | ©2021 Wilshire Advisors LLC

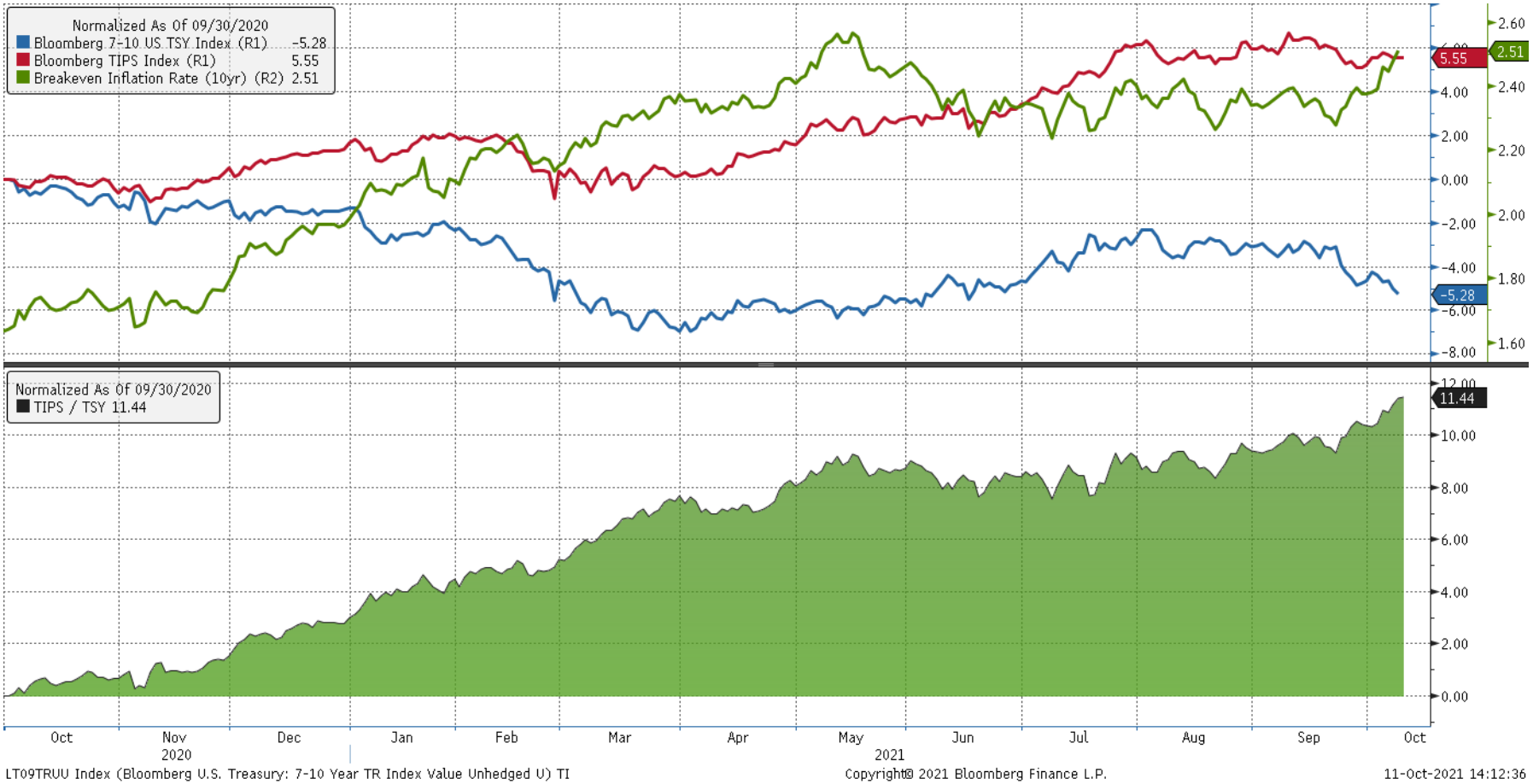
Rate Change Attribution



Data Source: Bloomberg

wilshire.com | ©2021 Wilshire Advisors LLC

U.S. Treasury vs. TIPS Returns



Data Source: Bloomberg

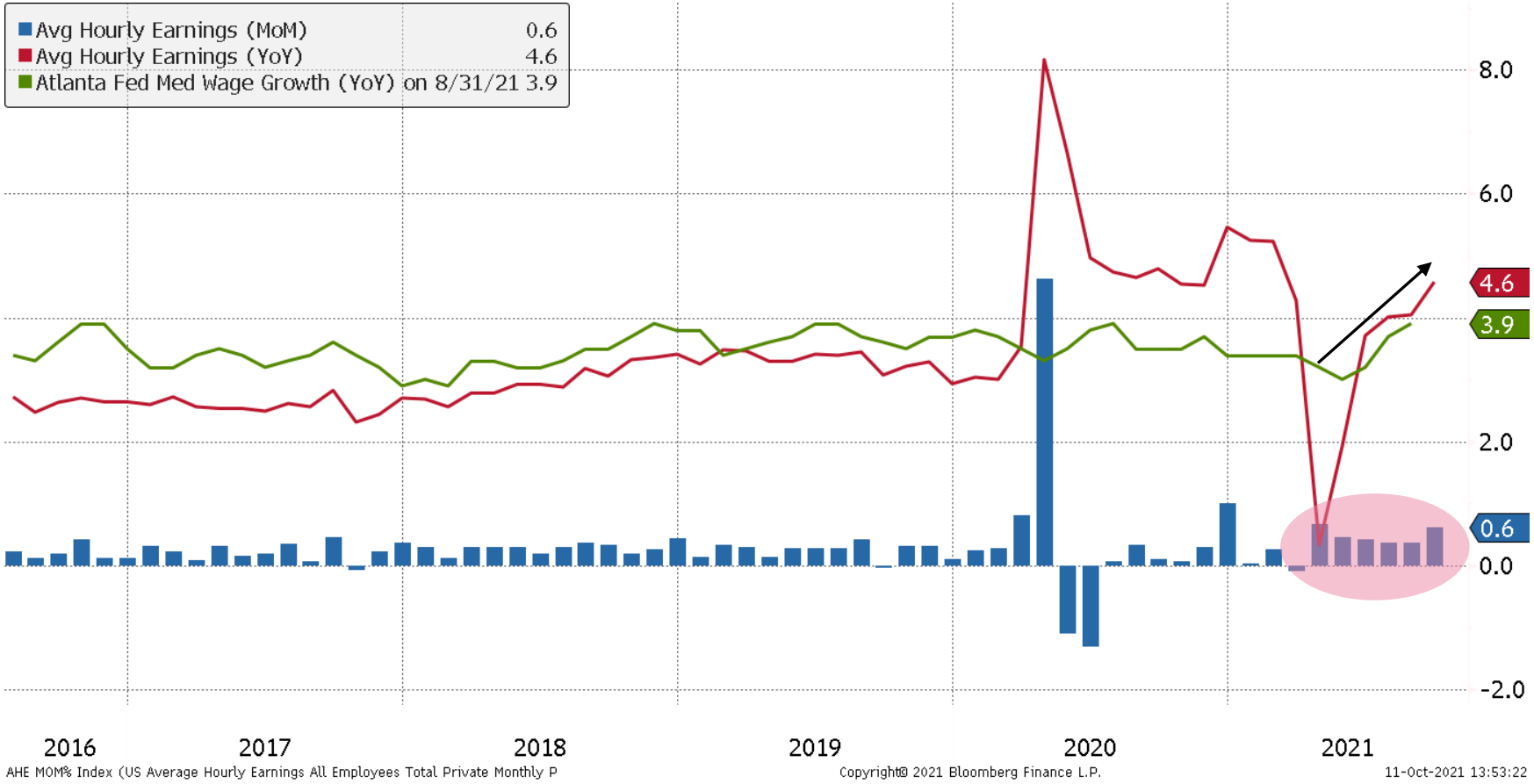
Inflation Persists

Data Source: Bloomberg

wilshire.com | ©2021 Wilshire Advisors LLC

Wages Rising

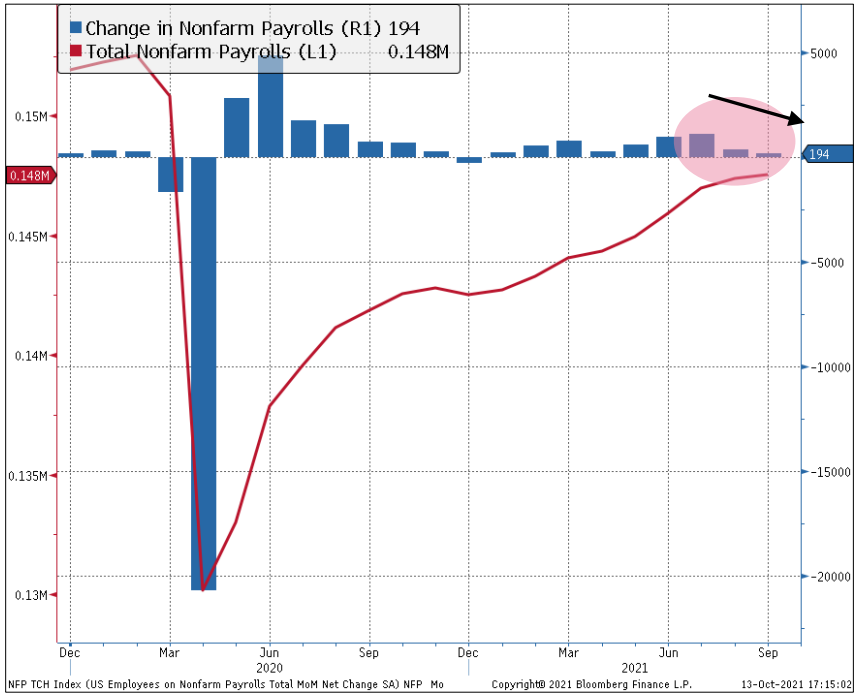
Since 2Q: AHE rose 3.7% to 4.6%; Atlanta Fed wage Growth: 3.2% to 3.9%

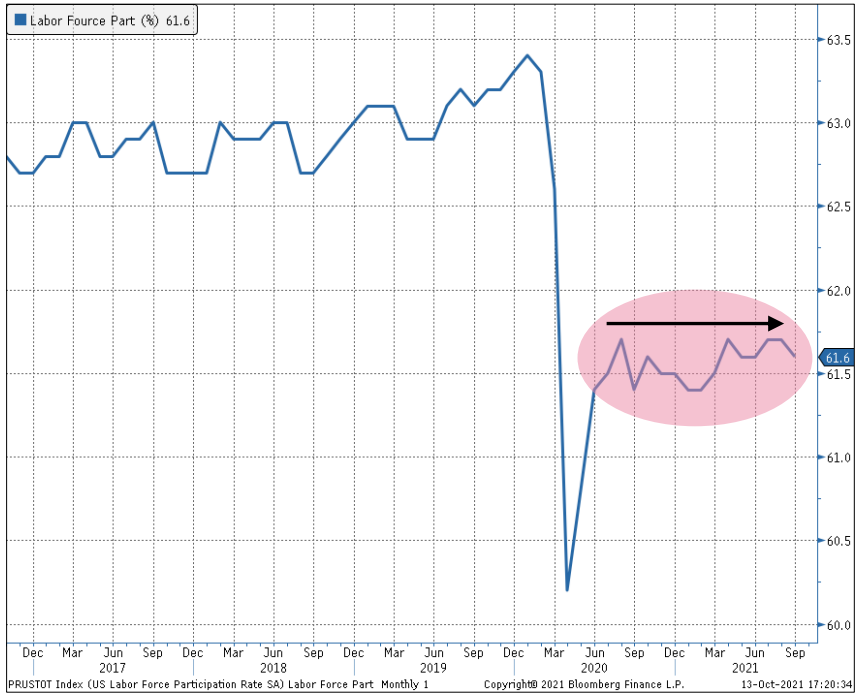


Data Source: Bloomberg

wilshire.com | ©2021 Wilshire Advisors LLC

Employment Gains Slowing…



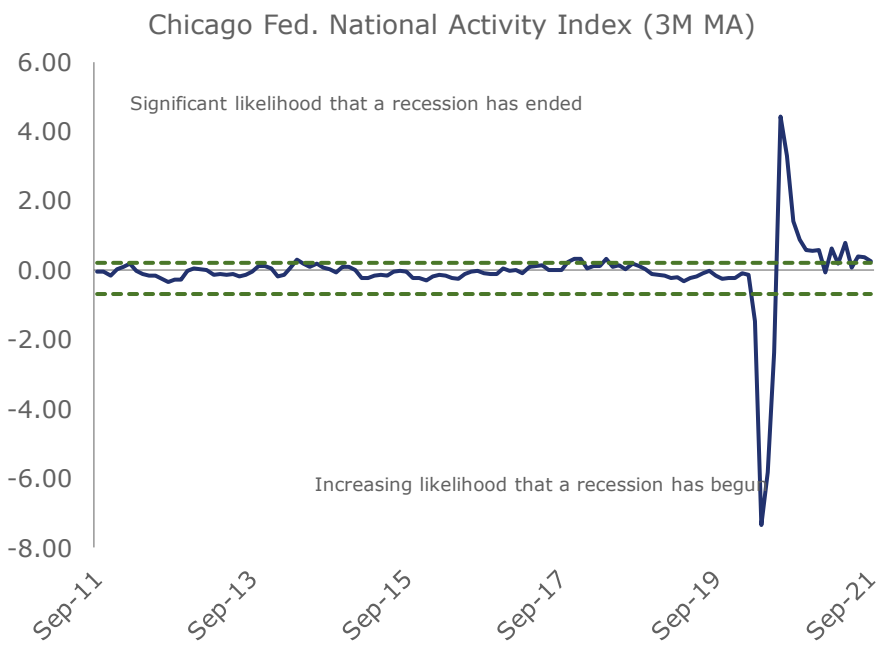


Data Source: Bloomberg

Economic/Market Activity

©2021 Wilshire Advisors LLC

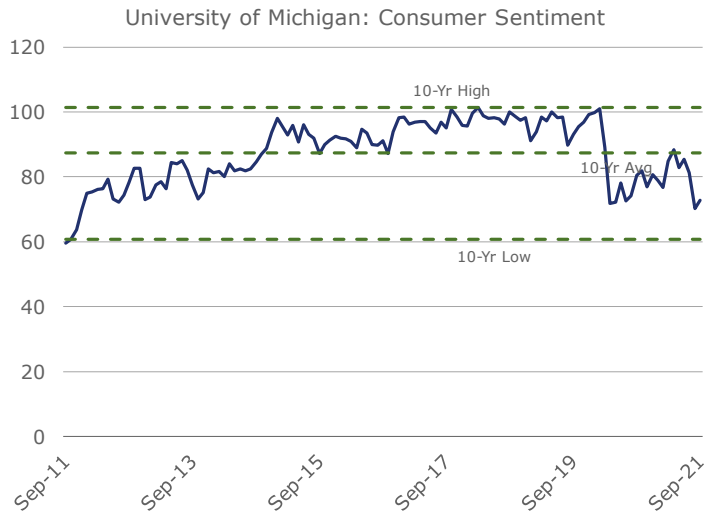
Economic Growth

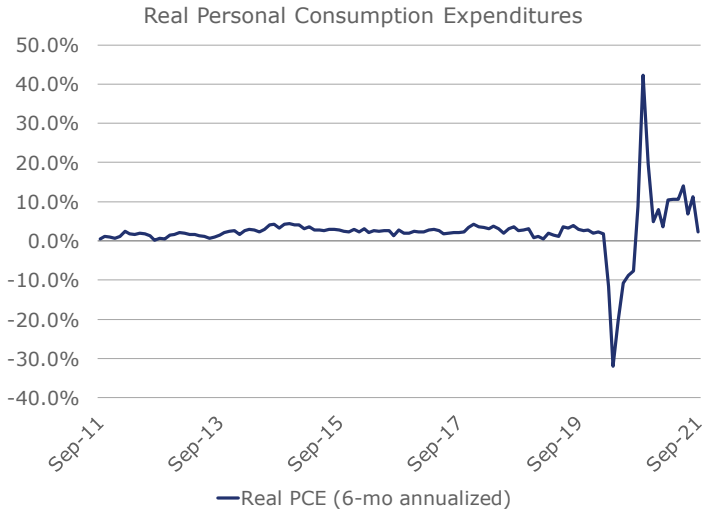


Data Sources: Bloomberg

wilshire.com | ©2021 Wilshire Advisors LLC

Consumer Activity

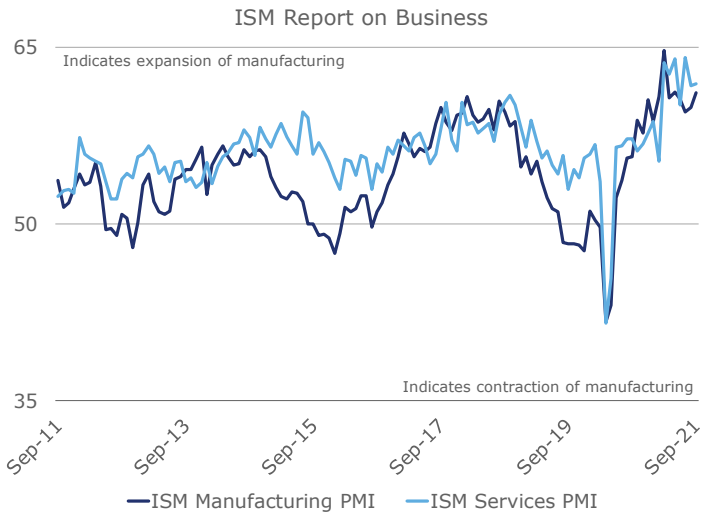




Data Sources: Bloomberg

wilshire.com | ©2021 Wilshire Advisors LLC

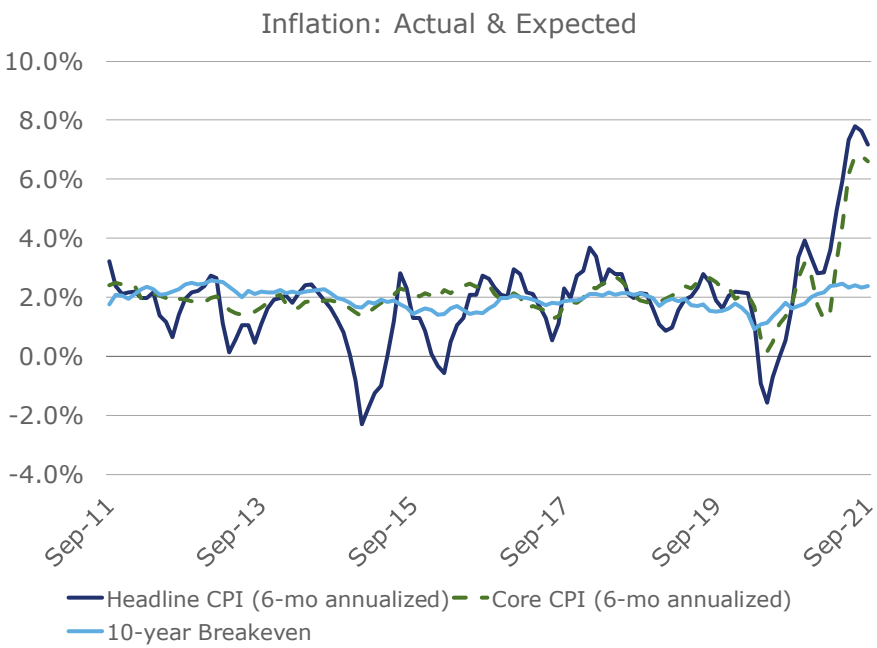
Business Activity

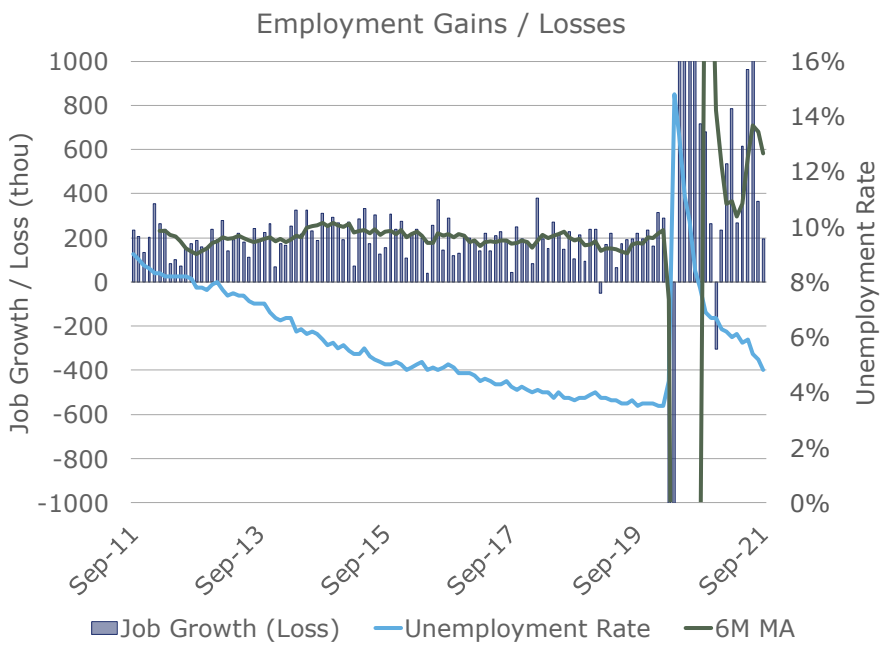


Data Sources: Bloomberg

wilshire.com | ©2021 Wilshire Advisors LLC

Inflation and Employment



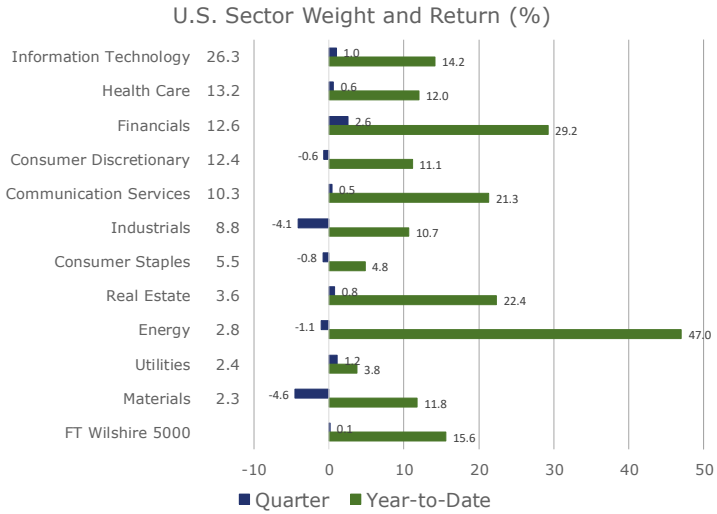


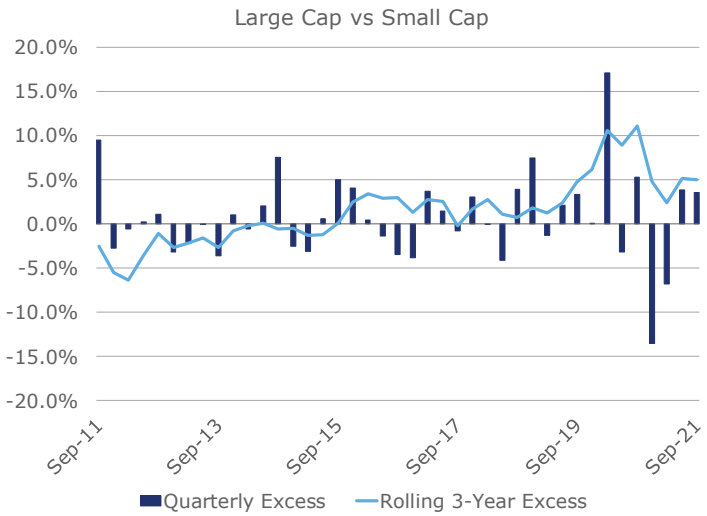
Data Sources: Bloomberg

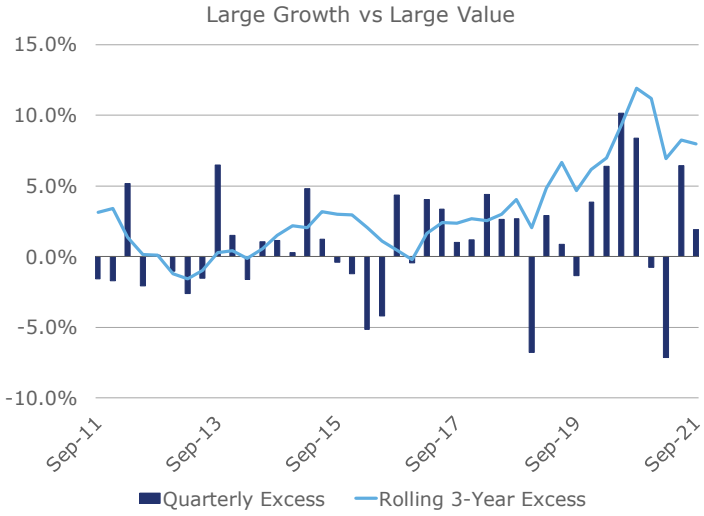
wilshire.com | ©2021 Wilshire Advisors LLC

U.S. Equity Market

As of 9/30/2021	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
FT Wilshire 5000	0.1	15.6	32.4	16.2	17.0	16.7
Wilshire U.S. Large Cap	0.4	15.6	30.9	16.7	17.4	16.8
Wilshire U.S. Small Cap	-3.0	15.4	51.1	11.2	13.4	15.1
Wilshire U.S. Large Growth	1.3	15.5	30.3	20.9	22.1	19.4
Wilshire U.S. Large Value	-0.6	14.7	30.3	12.0	12.4	14.1
Wilshire U.S. Small Growth	-3.8	8.2	40.4	13.0	16.1	15.7
Wilshire U.S. Small Value	-1.8	23.3	63.0	9.4	10.7	14.4
Wilshire REIT Index	1.6	24.8	38.0	10.4	7.0	11.3
MSCI USA Min. Vol. Index	0.3	9.6	17.2	11.1	12.4	14.2
FTSE RAFI U.S. 1000 Index	-0.8	20.8	41.9	12.9	13.8	15.2





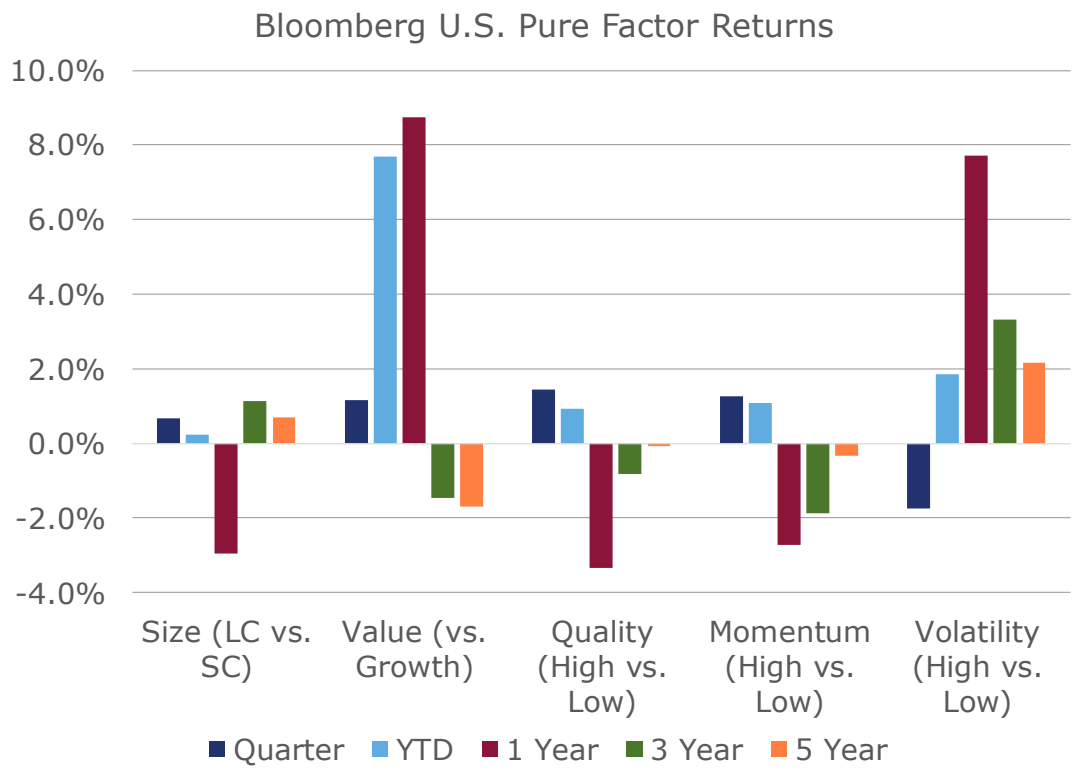


Data Sources: Bloomberg, Wilshire Atlas

 ©2021 Wilshire Advisors LLC

U.S. Factor Returns

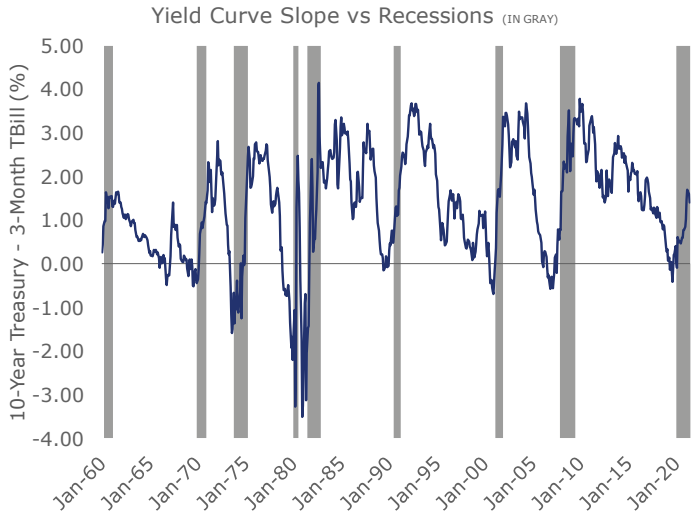
- Factor returns represent the contribution from large cap, value, etc. stocks within Bloomberg's Portfolio & Risk Analytics module
- Value stocks have rebounded during the past year

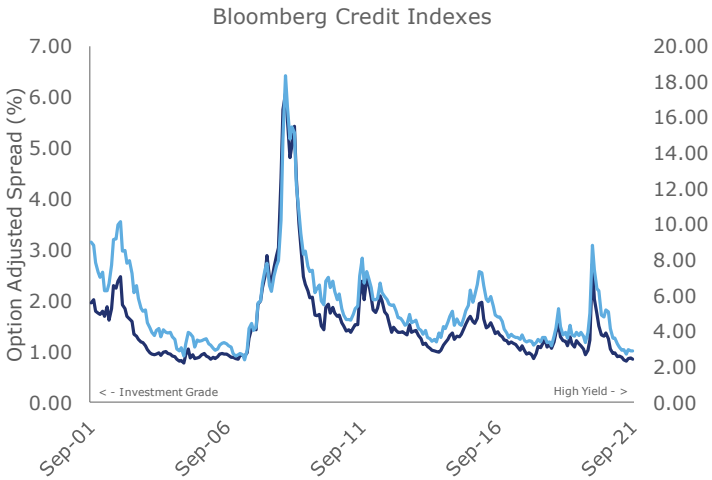


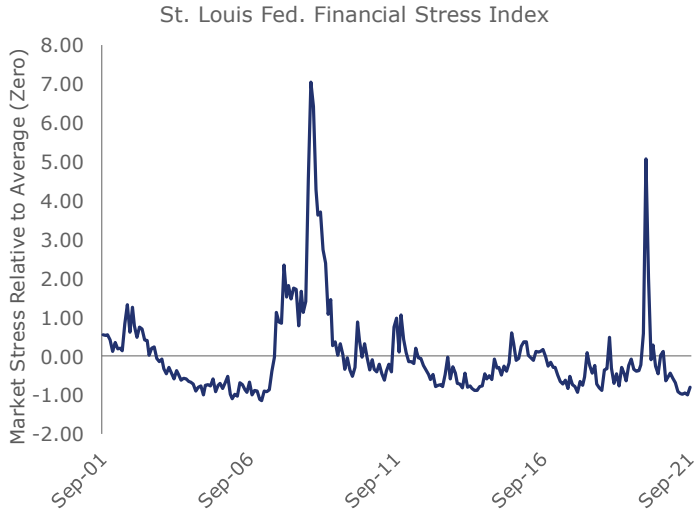
Data Sources: Bloomberg

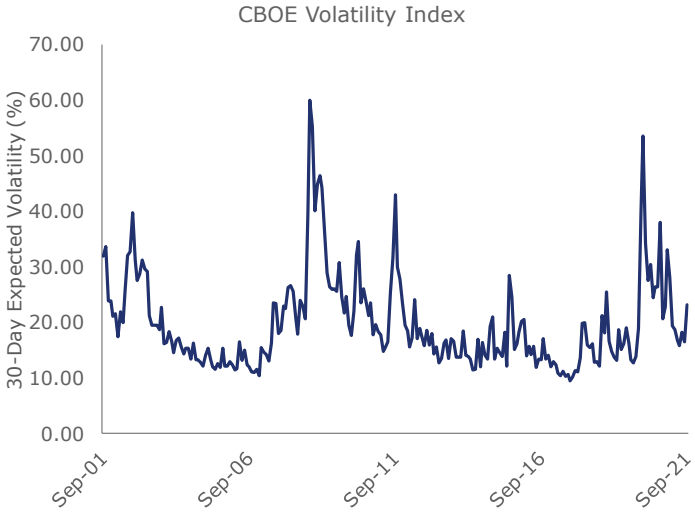
wilshire.com | ©2021 Wilshire Advisors LLC

Risk Monitor





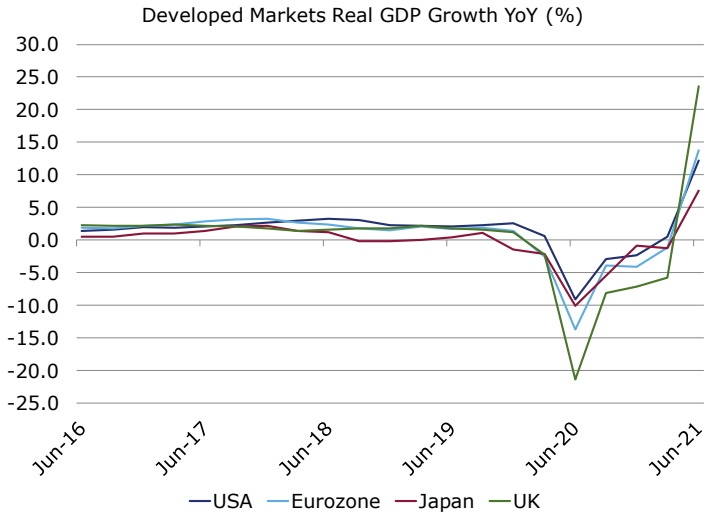


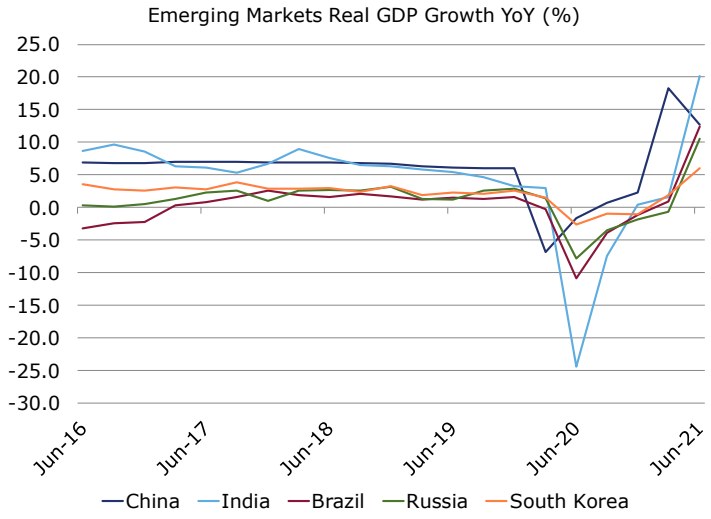


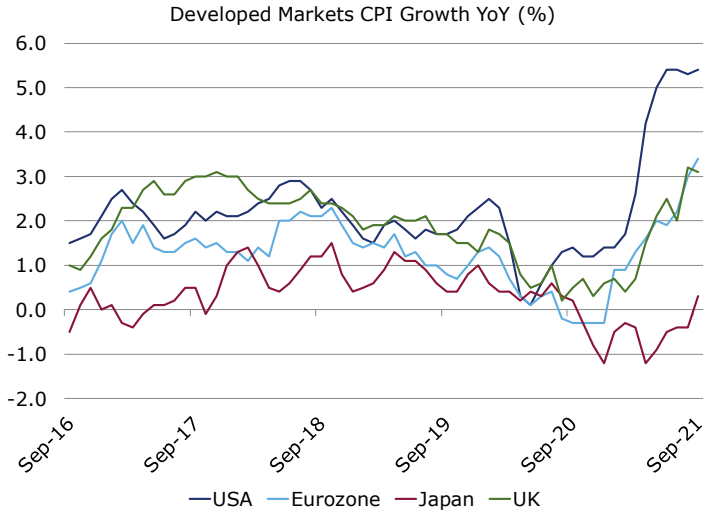
Data Sources: Bloomberg

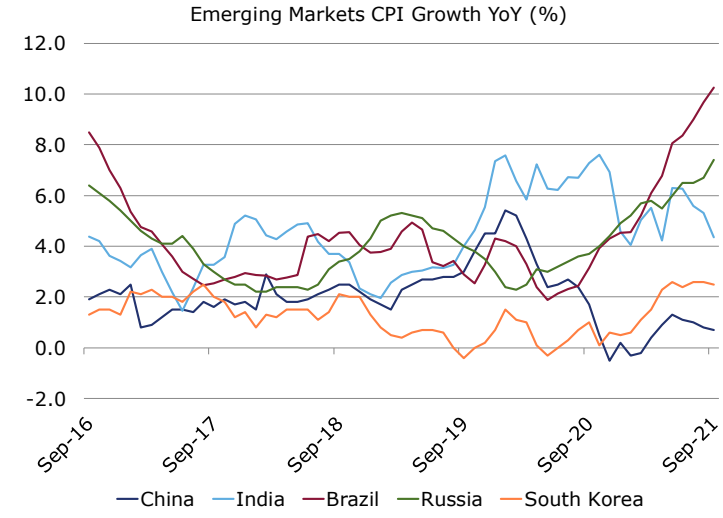
wilshire.com | ©2021 Wilshire Advisors LLC

Non-U.S. Growth and Inflation







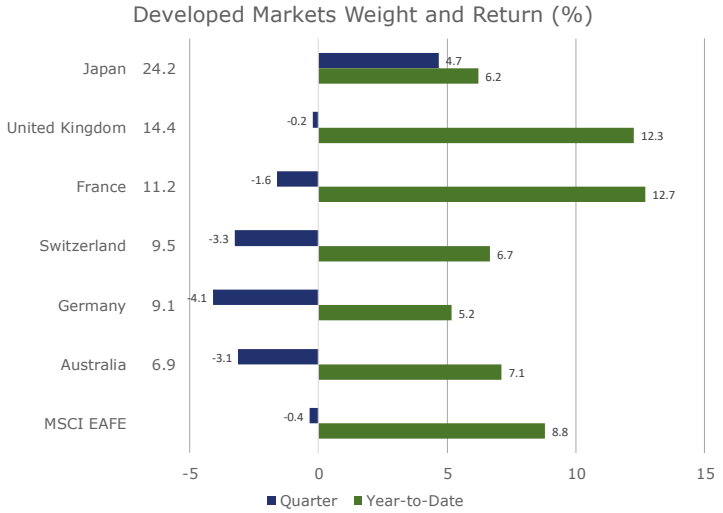


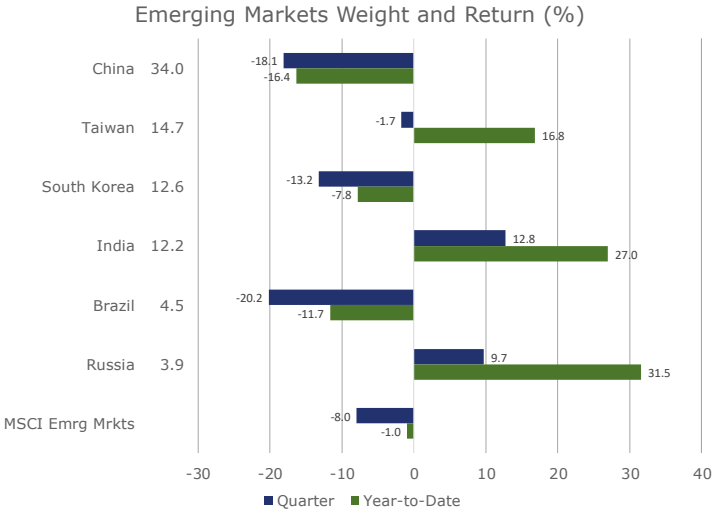
Data Sources: Bloomberg

wilshire.com | ©2021 Wilshire Advisors LLC

Non-U.S. Equity Market

As of 9/30/2021	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
MSCI ACWI ex-US ($G)	-2.9	6.3	24.4	8.5	9.4	8.0
MSCI EAFE ($G)	-0.4	8.8	26.3	8.1	9.3	8.6
MSCI Emerging Markets ($G)	-8.0	-1.0	18.6	9.0	9.6	6.5
MSCI Frontier Markets ($G)	1.7	2.6	20.5	3.3	3.6	4.0
MSCI ACWI ex-US Growth ($G)	-3.6	2.9	17.3	12.3	11.6	9.7
MSCI ACWI ex-US Value ($G)	-1.9	10.3	33.0	4.9	7.3	6.5
MSCI ACWI ex-US Small ($G)	0.1	12.6	33.5	10.8	10.7	9.8
MSCI ACWI Minimum Volatility	0.2	7.7	14.7	8.2	9.1	10.6
MSCI EAFE Minimum Volatility	0.3	4.9	13.4	4.7	6.1	7.9
FTSE RAFI Developed ex-US	-1.1	12.5	36.5	6.1	8.6	7.5
MSCI EAFE LC (G)	1.4	14.7	27.8	7.7	9.5	10.6
MSCI Emerging Markets LC (G)	-6.6	1.0	17.2	9.8	10.8	9.0





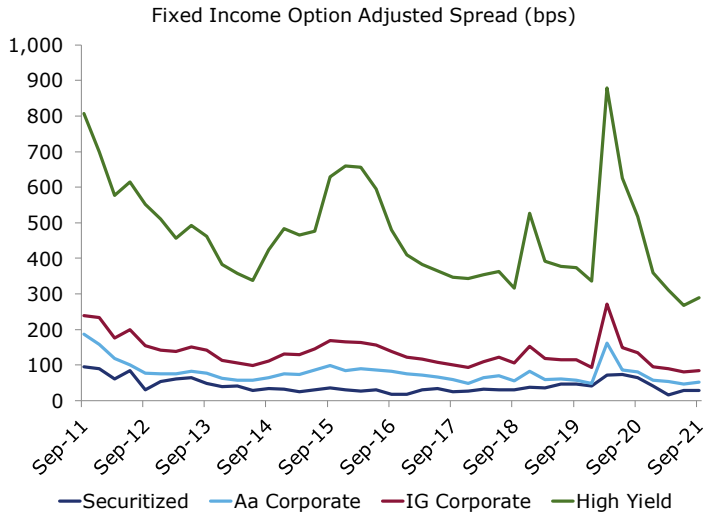
Data Sources: Bloomberg

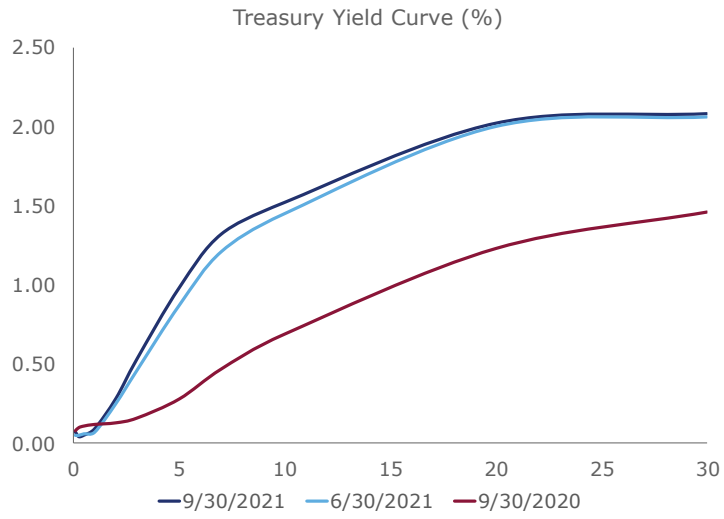
wilshire.com | ©2021 Wilshire Advisors LLC

U.S. Fixed Income

As of 9/30/2021	YTW	DUR.	QTR	YTD	1 YR	3 YR	5 YR	10 YR
Bloomberg Aggregate	1.6	6.7	0.1	-1.6	-0.9	5.4	2.9	3.0
Bloomberg Treasury	1.0	7.1	0.1	-2.5	-3.3	4.9	2.2	2.2
Bloomberg Gov't-Rel.	1.4	6.1	-0.1	-1.3	-0.4	4.9	2.9	2.9
Bloomberg Securitized	1.8	4.6	0.1	-0.7	-0.3	4.0	2.2	2.5
Bloomberg Corporate	2.1	8.7	0.0	-1.3	1.7	7.4	4.6	4.9
Bloomberg LT Gov't/Credit	2.7	16.6	0.1	-4.6	-3.0	10.1	5.2	5.8
Bloomberg LT Treasury	2.0	18.7	0.5	-7.5	-10.3	9.2	3.3	4.4
Bloomberg LT Gov't-Rel.	3.0	13.7	-0.5	-3.4	-0.7	7.9	4.7	5.5
Bloomberg LT Corporate	3.1	15.3	-0.1	-2.6	2.5	10.5	6.3	6.7
Bloomberg U.S. TIPS *	1.4	8.2	1.8	3.5	5.2	7.4	4.3	3.1
Bloomberg High Yield	4.0	4.0	0.9	4.5	11.3	6.9	6.5	7.4
Treasury Bills	0.0	0.3	0.0	0.0	0.1	1.2	1.2	0.7

* Yield and Duration statistics are for a proxy index based on similar maturity, the Bloomberg Barclays U.S. Treasury 7-10 Year Index





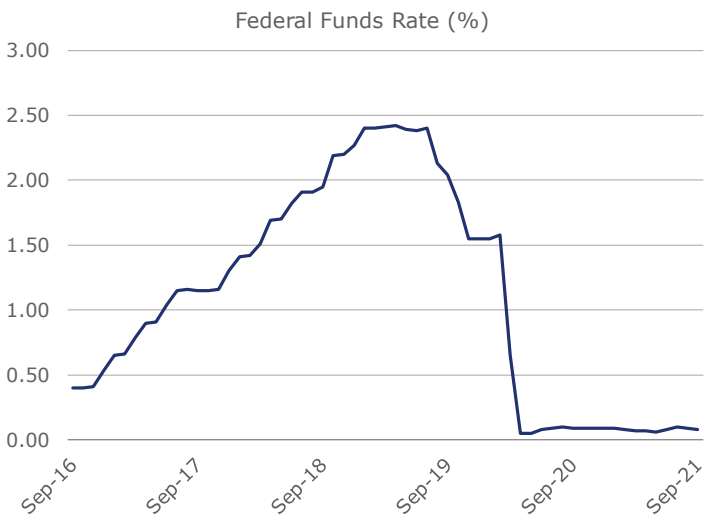
Data Sources: Bloomberg

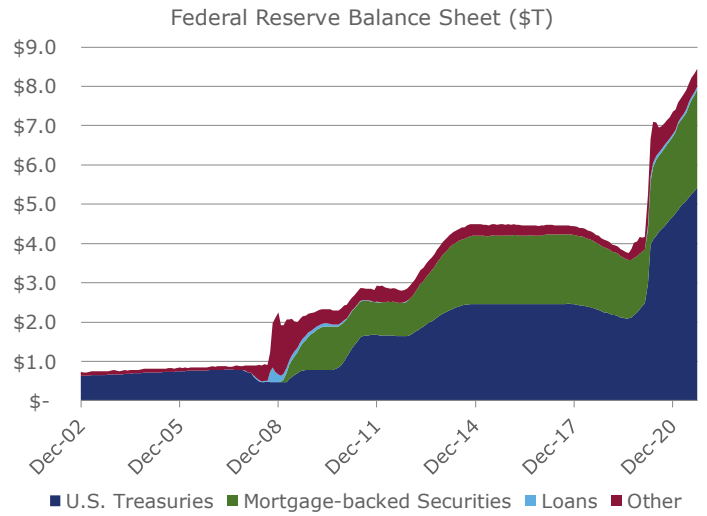
wilshire.com | ©2021 Wilshire Advisors LLC

Federal Reserve

- Current FOMC expectation is for one 25 basis point increase in the Fed-funds rate during 2022
- Federal Reserve has added more than $4 trillion in assets to their balance sheet during the past 18 months
- QE4 is now larger than the 3 phases of quantitative easing – combined – following the global financial crisis

	Announced	Closed	Amount (bil)
QE1	11/25/2008	3/31/2010	$1,403
QE2	11/3/2010	6/29/2012	$568
QE3	9/13/2012	10/29/2014	$1,674
QE4	3/23/2020		$4,174





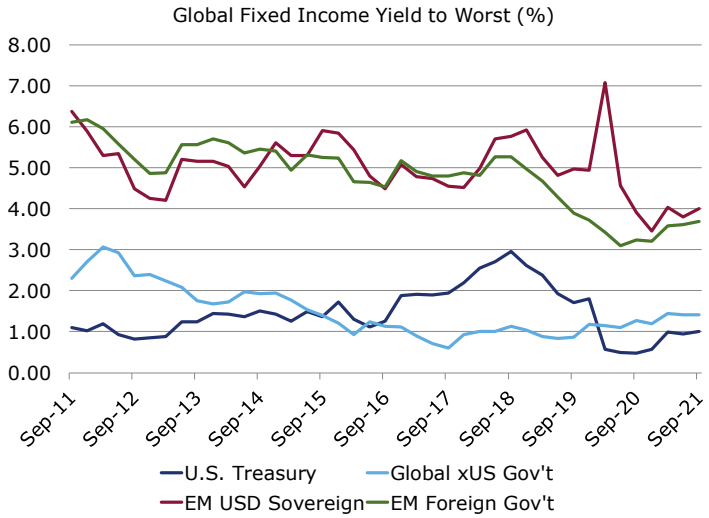
Data Sources: Bloomberg

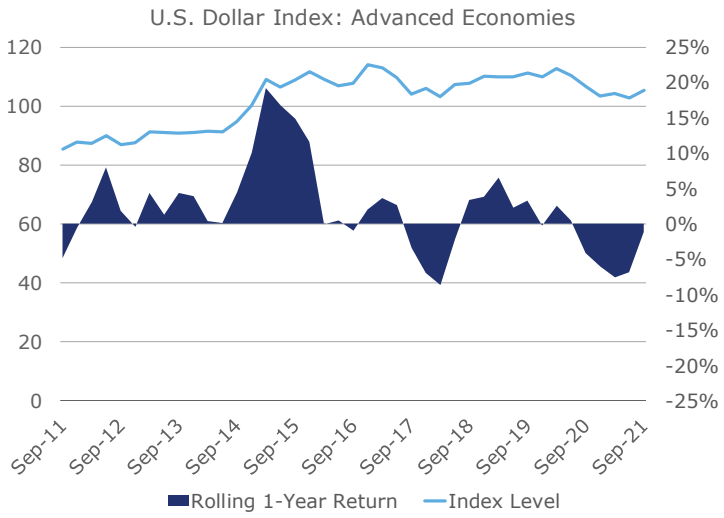
wilshire.com | ©2021 Wilshire Advisors LLC

Non-U.S. Fixed Income

As of 9/30/2021	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
Developed Markets						
Bloomberg Global Aggregate xUS	-1.6	-5.9	-1.2	3.2	1.1	0.9
Bloomberg Global Aggregate xUS *	0.1	-1.5	-0.5	3.9	2.7	3.9
Bloomberg Global Inflation Linked xUS	-0.1	-2.1	4.7	5.8	3.3	3.5
Bloomberg Global Inflation Linked xUS *	2.4	1.4	3.3	6.4	4.1	5.8
Emerging Markets (Hard Currency)						
Bloomberg EM USD Aggregate	-0.5	-1.1	3.3	5.9	4.1	5.7
Emerging Markets (Foreign Currency)						
Bloomberg EM Local Currency Gov't	-1.0	-2.0	4.9	5.0	2.9	2.6
Bloomberg EM Local Currency Gov't *	0.3	-1.0	-0.1	4.4	2.8	3.0
Euro vs. Dollar	-2.3	-5.2	-1.2	-0.1	0.6	-1.4
Yen vs. Dollar	-0.2	-7.2	-5.2	0.7	-1.9	-3.6
Pound vs. Dollar	-2.6	-1.4	4.3	1.1	0.8	-1.4

* Returns are reported in terms of local market investors, which removes currency effects.



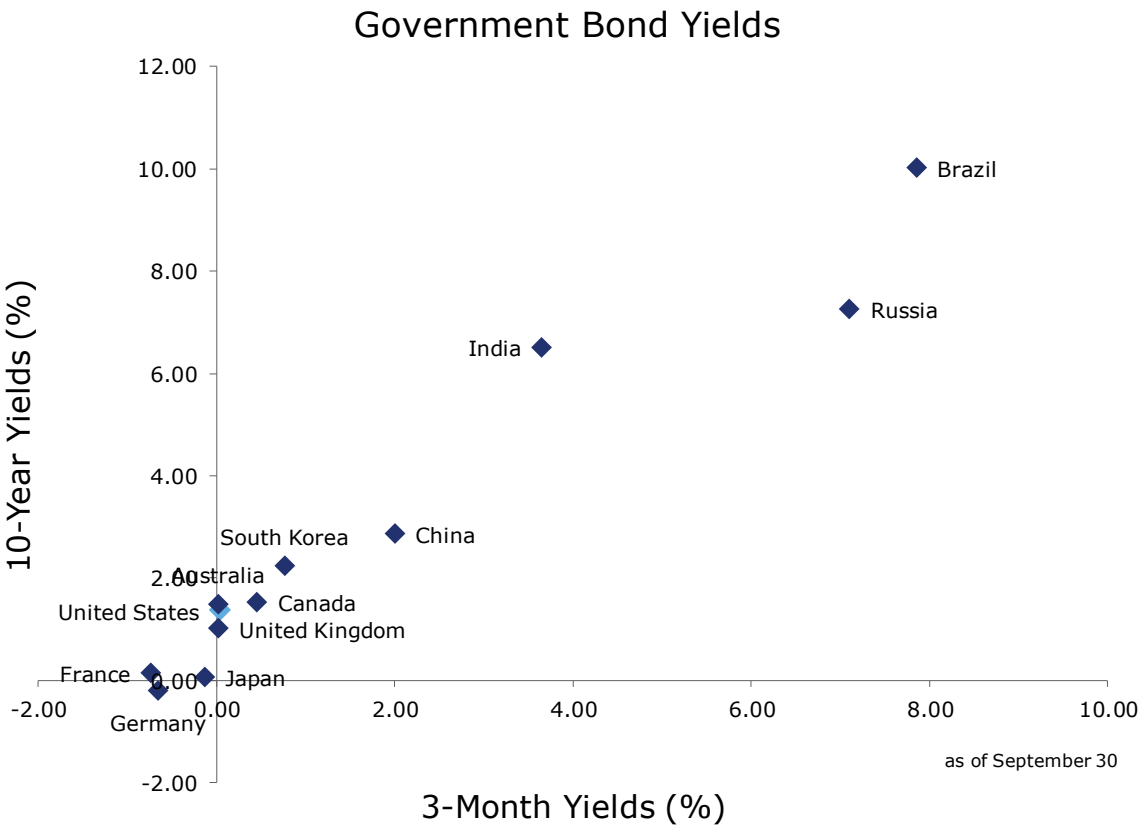


Data Sources: Bloomberg

wilshire.com | ©2021 Wilshire Advisors LLC

Global Interest Rates

Negative rates found in Germany and France; low but positive rates, and at similar levels, in the U.S., Australia and in the U.K.

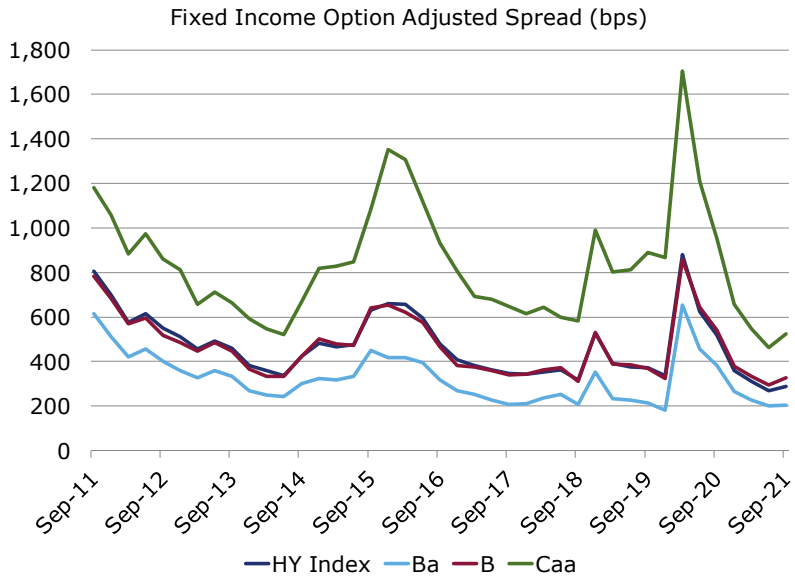


Data Sources: Bloomberg

wilshire.com | ©2021 Wilshire Advisors LLC

High Yield Bond Market

As of 9/30/2021		YTW	QTR	YTD	1 YR	3 YR	5 YR	10 YR
Bloomberg High Yield		4.0	0.9	4.5	11.3	6.9	6.5	7.4
S&P LSTA Leveraged Loan		3.7	1.0	3.2	6.7	3.9	4.3	4.7
High Yield Quality Distribution	**Weight**							
Ba U.S. High Yield	53.8%	3.2	1.1	3.8	9.7	8.7	6.8	7.5
B U.S. High Yield	34.1%	4.5	0.6	4.0	10.0	6.1	6.0	6.8
Caa U.S. High Yield	11.7%	6.3	0.8	8.0	18.7	3.1	6.1	7.9
Ca to D U.S. High Yield	0.4%	19.0	0.2	29.2	73.3	0.1	10.7	0.9
Non-Rated U.S. High Yield	0.0%	0.0	0.0	0.0	0.0	-0.8	2.2	3.4

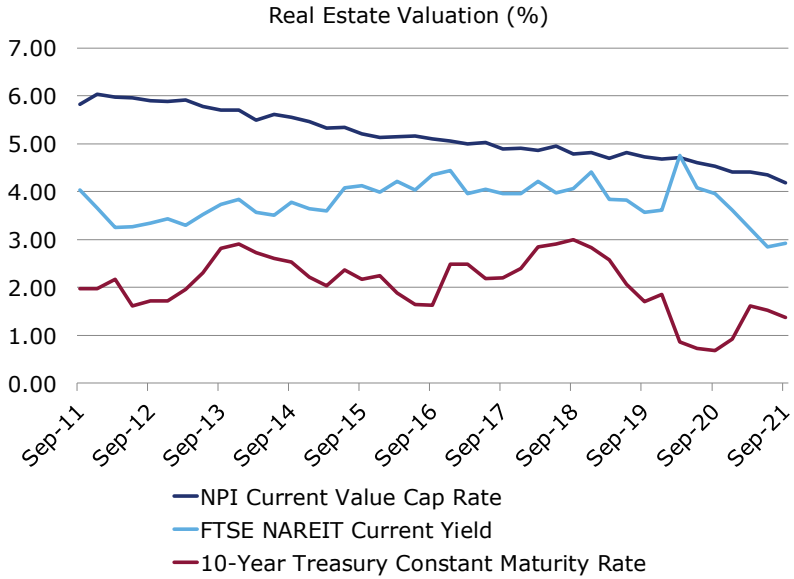


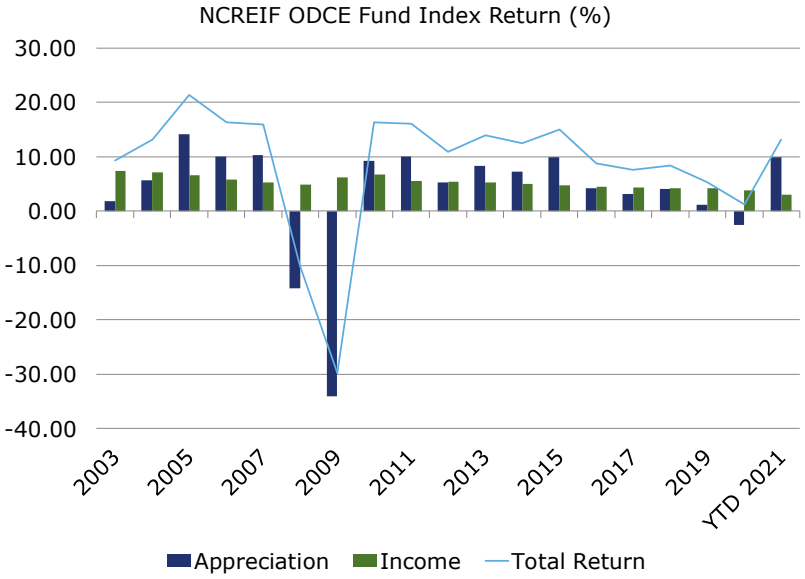
Data Sources: Bloomberg

wilshire.com | ©2021 Wilshire Advisors LLC

Real Assets

As of 9/30/2021	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
Bloomberg U.S. TIPS	1.8	3.5	5.2	7.4	4.3	3.1
Bloomberg Commodity Index	6.6	29.1	42.3	6.9	4.5	-2.7
Bloomberg Gold Index	-1.0	-7.9	-8.2	12.1	4.7	-0.1
Wilshire Global RESI Index	0.4	18.5	34.4	8.2	6.2	9.9
NCREIF ODCE Fund Index	6.6	13.1	14.6	7.1	7.5	9.9
NCREIF Timberland Index	1.9	4.4	5.0	2.4	2.9	4.9
FTSE Global Core Infrastructure 50/50	-0.1	7.4	16.7	8.5	7.9	10.0
Alerian Midstream Energy	-1.3	38.9	66.9	3.9	2.4	n.a.
Bitcoin	25.6	49.8	305.7	87.8	135.0	147.0





Data Sources: Bloomberg, National Council of Real Estate Investment Fiduciaries

wilshire.com | ©2021 Wilshire Advisors LLC

Asset Class Performance

Asset Class Returns - Best to Worst

2016	2017	2018	2019	2020	2021 YTD
High Yield 17.1%	Emrg Mrkts 37.7%	T-Bills 1.9%	U.S. Equity 31.0%	U.S. Equity 20.8%	Commodities 29.1%
U.S. Equity 13.4%	Developed 25.6%	Core Bond 0.0%	REITs 25.8%	Emrg Mrkts 18.7%	REITs 24.8%
Commodities 11.8%	U.S. Equity 21.0%	U.S. TIPS -1.3%	Developed 22.7%	U.S. TIPS 11.0%	U.S. Equity 15.6%
Emrg Mrkts 11.6%	High Yield 7.5%	High Yield -2.1%	Emrg Mrkts 18.9%	Developed 8.3%	Developed 8.8%
REITs 7.2%	REITs 4.2%	REITs -4.8%	High Yield 14.3%	Core Bond 7.5%	High Yield 4.5%
U.S. TIPS 4.7%	Core Bond 3.6%	U.S. Equity -5.3%	Core Bond 8.7%	High Yield 7.1%	U.S. TIPS 3.5%
Core Bond 2.6%	U.S. TIPS 3.0%	Commodities -11.2%	U.S. TIPS 8.4%	T-Bills 0.7%	T-Bills 0.0%
Developed 1.5%	Commodities 1.7%	Developed -13.4%	Commodities 7.7%	Commodities -3.1%	Emrg Mrkts -1.0%
T-Bills 0.3%	T-Bills 0.8%	Emrg Mrkts -14.2%	T-Bills 2.3%	REITs -7.9%	Core Bond -1.6%

Annualized 5-Year as of 9/21
U.S. Equity 17.0%
Emrg Mrkts 9.6%
Developed 9.3%
REITs 7.0%
High Yield 6.5%
Commodities 4.5%
U.S. TIPS 4.3%
Core Bond 2.9%
T-Bills 1.2%

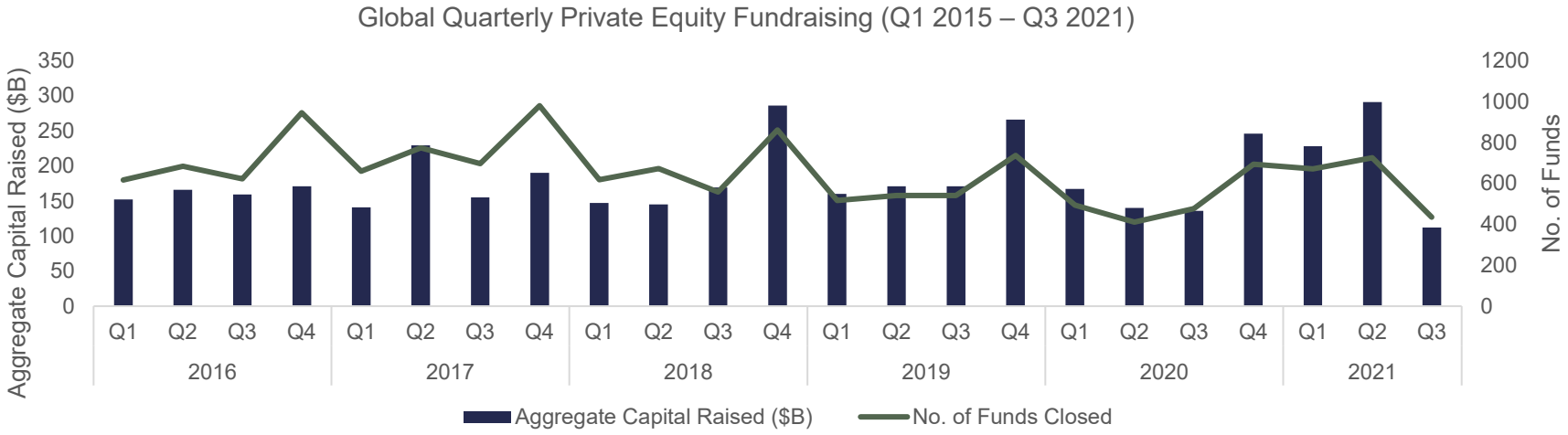
Data Sources: Bloomberg Note: Developed asset class is developed equity markets ex-U.S., ex-Canada

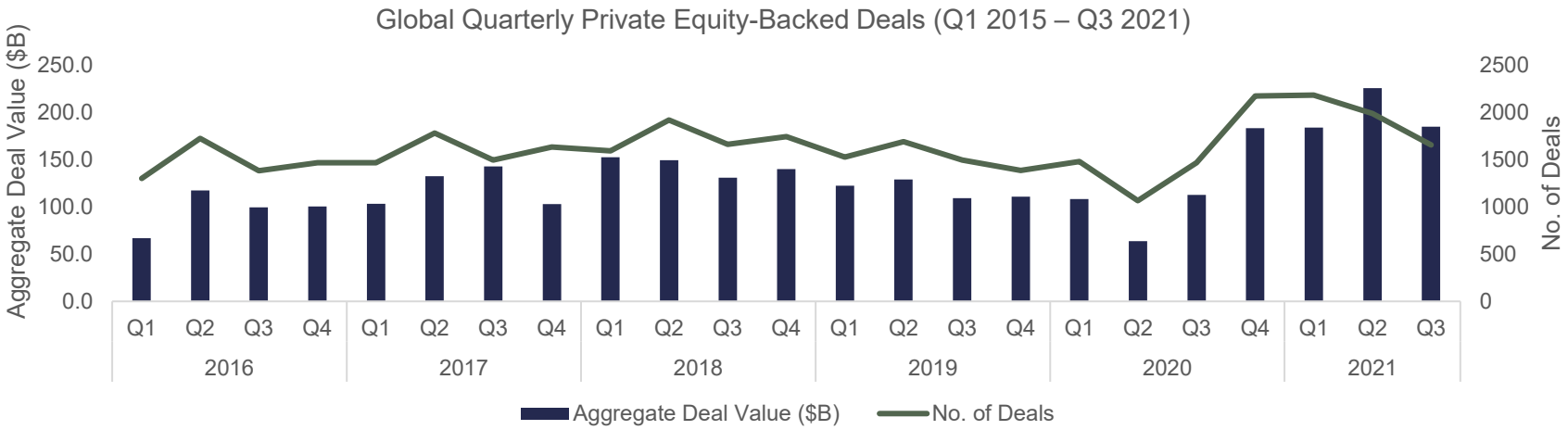
wilshire.com | ©2021 Wilshire Advisors LLC

Appendix: Private Market Trends

©2021 Wilshire Advisors LLC

Private Equity – Fundraising & Investment Activity

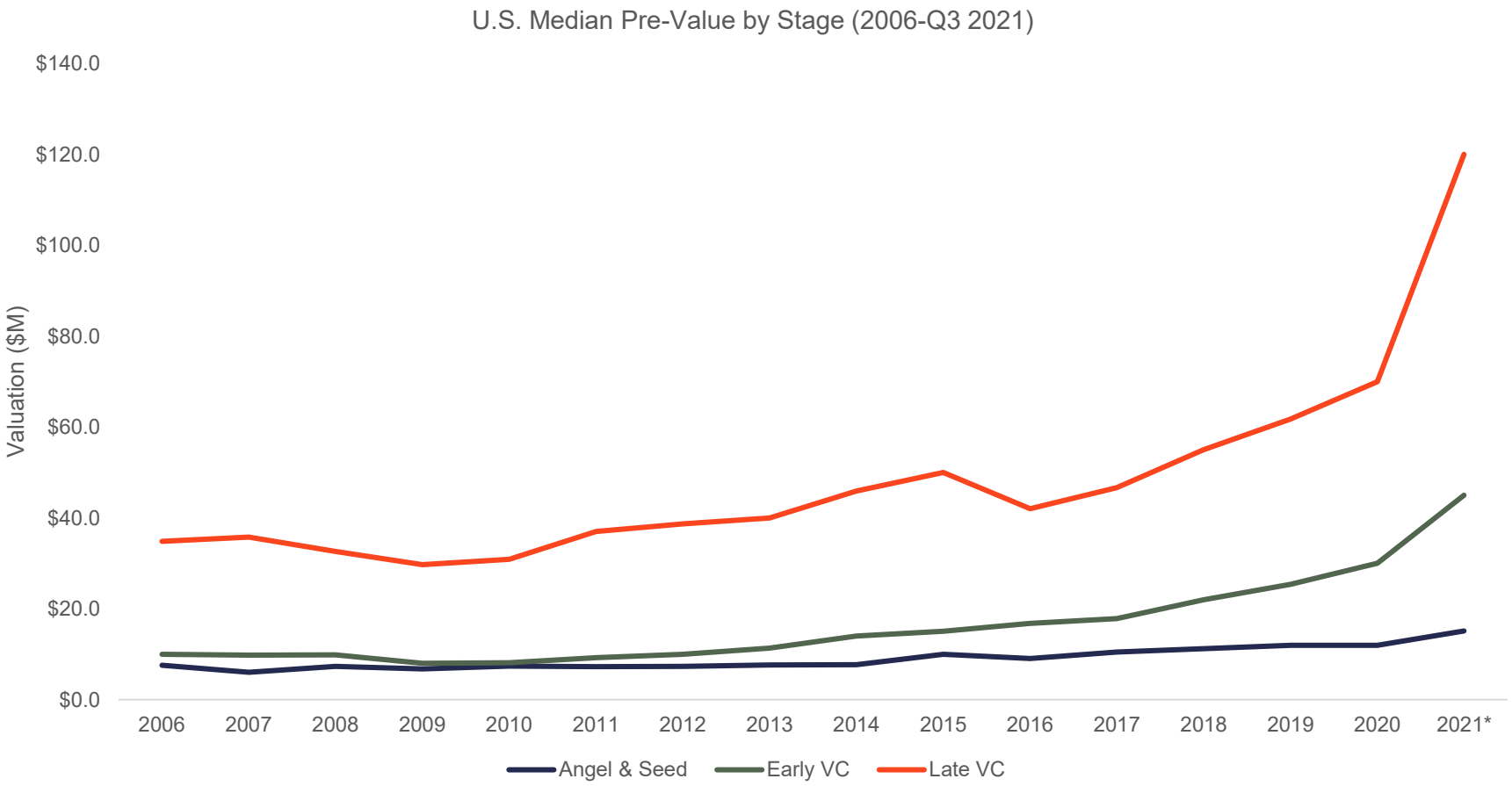




Source: Preqin, as of September 30, 2021.

wilshire.com | ©2021 Wilshire Advisors LLC

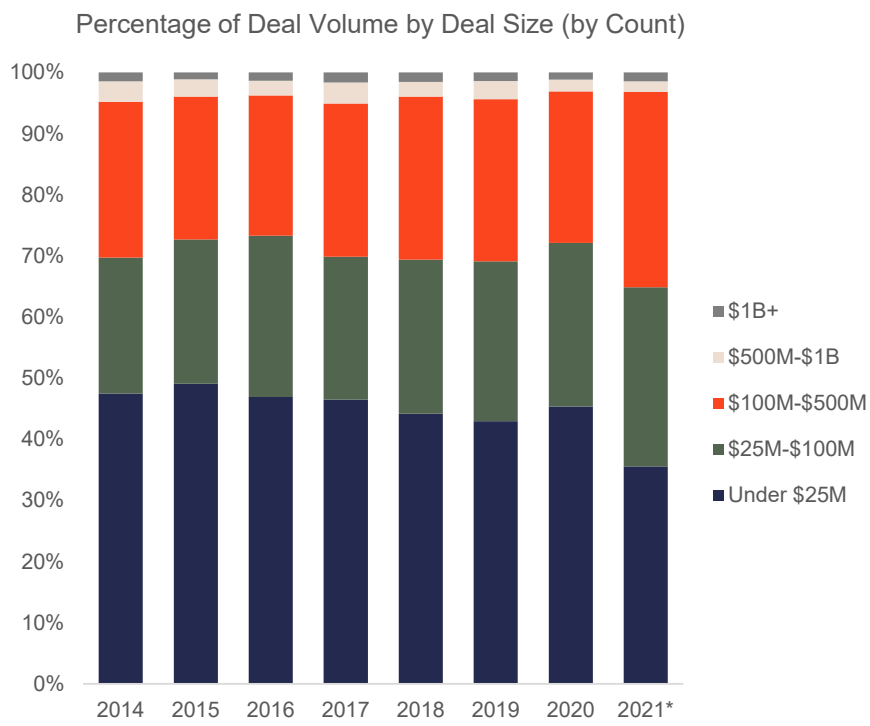
Private Equity – Pricing & Valuations

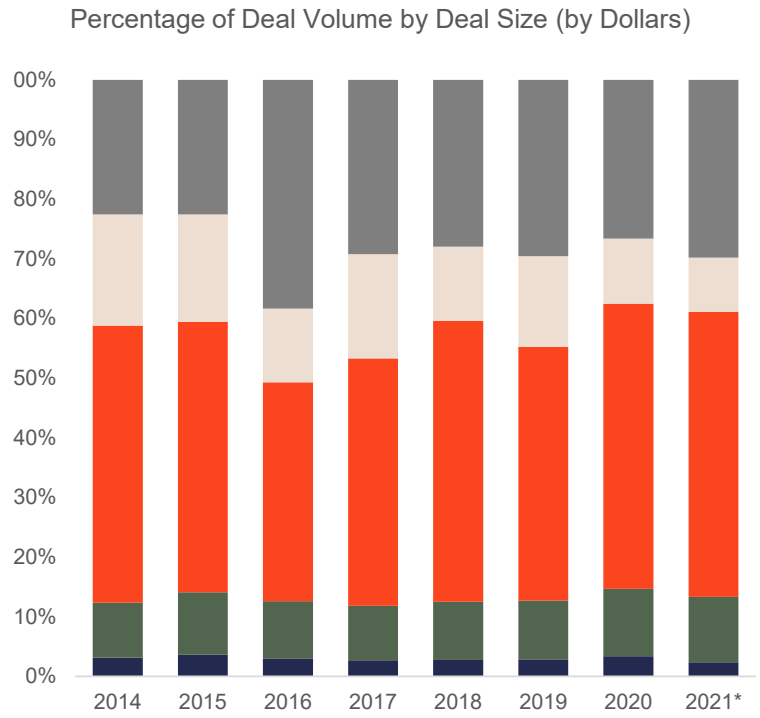


Source: S&P LBO; Pitchbook, *as of September 30, 2021.

wilshire.com | ©2021 Wilshire Advisors LLC

U.S. Investment Activity by Deal Size

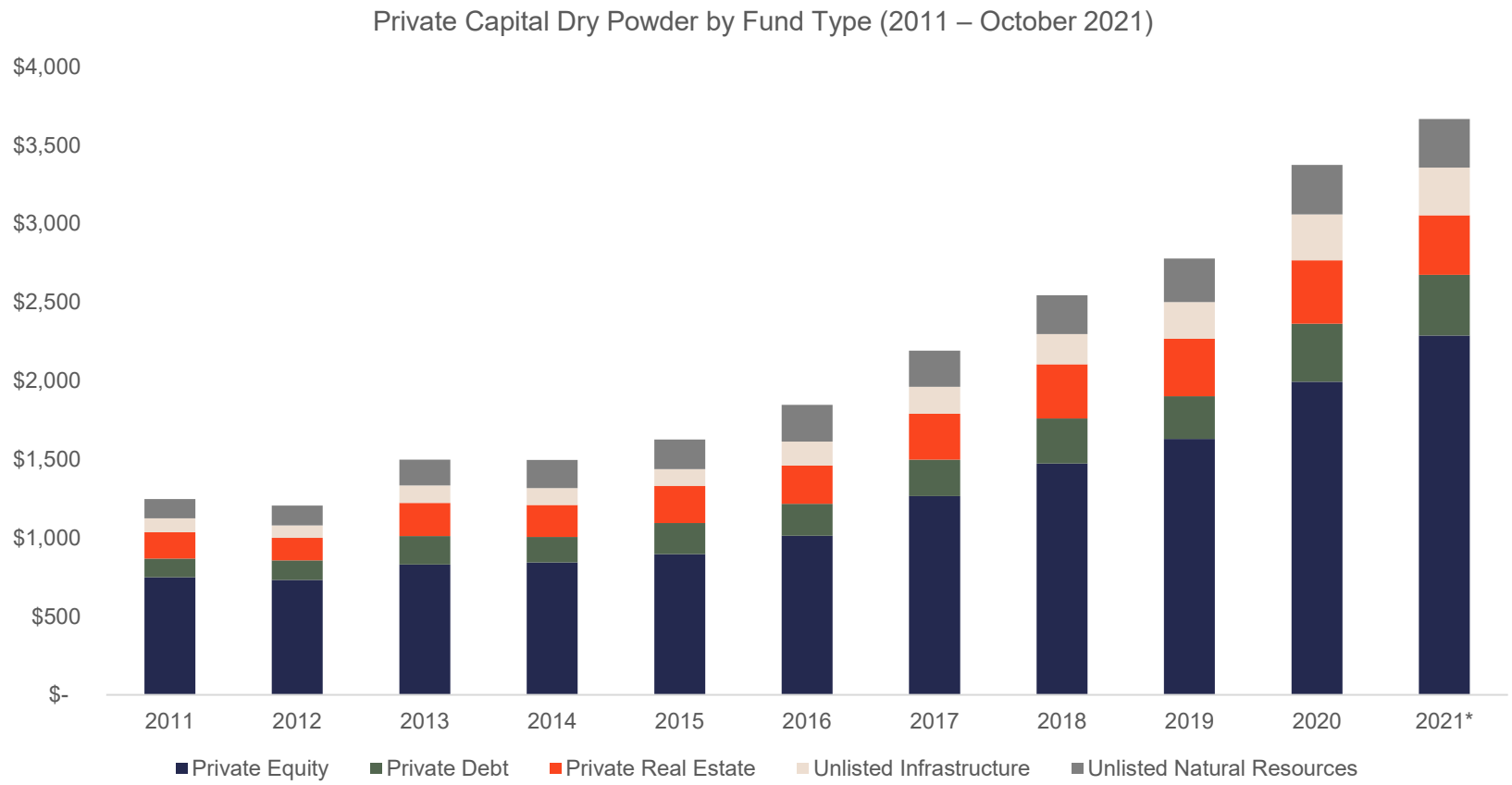




- Deal volume continues to be dominated by lower middle market deals with investment sizes below $100 million through the third quarter of 2021
- However, deals with below $100 million check sizes comprised only 13.3% of all deal volume by amount of capital invested in the third quarter of 2021

Source: Pitchbook, *as of September 30, 2021.

Private Capital Dry Powder

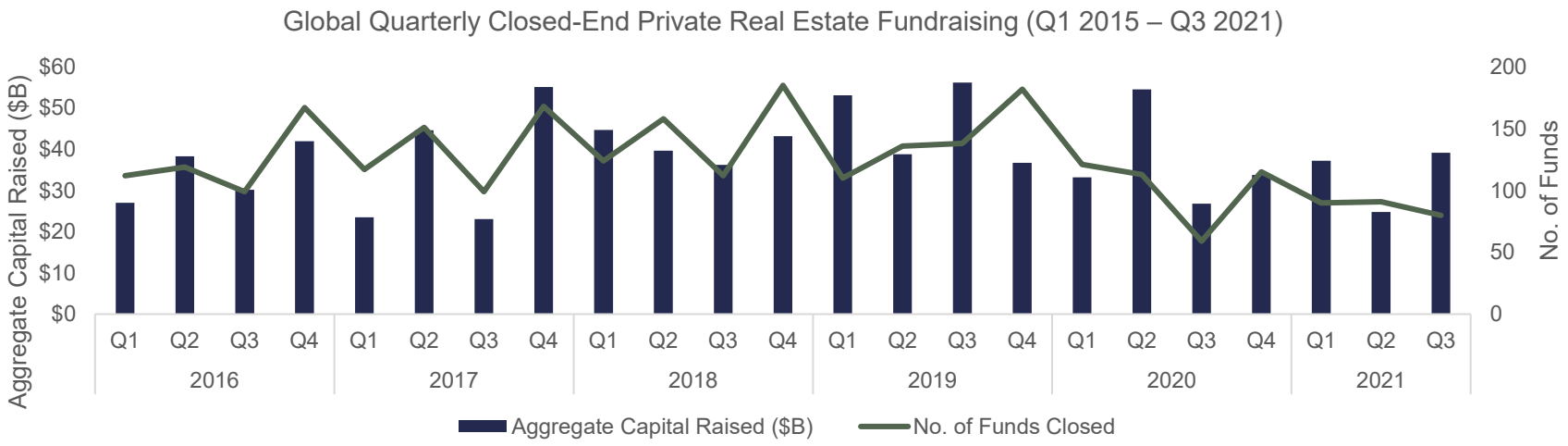


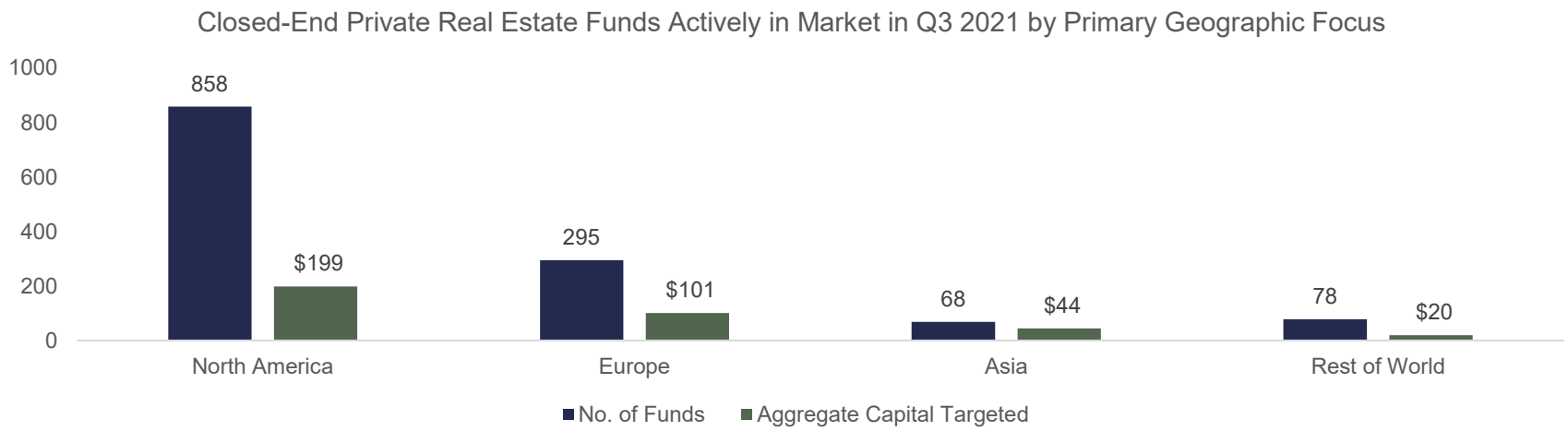
- Global private capital dry power continues to increase, topping $3.6 trillion across all fund types
- Private equity comprises just over 62% of total dry powder in the market as of October 2021

Source: Preqin, *as of October 24, 2021.

©2021 Wilshire Advisors LLC

Private Real Estate – Fundraising Activity

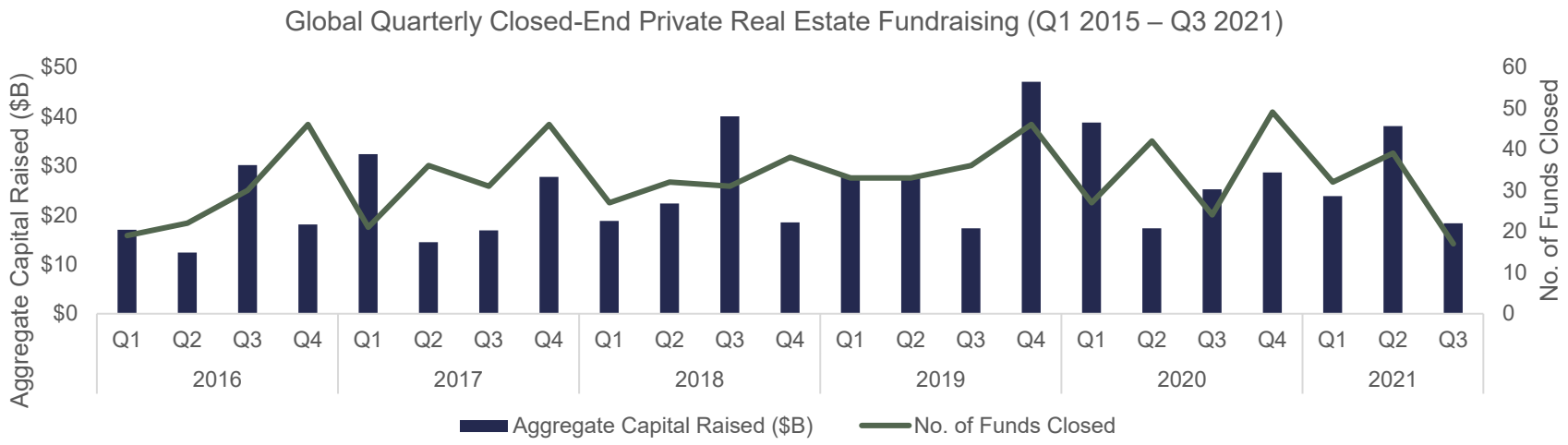


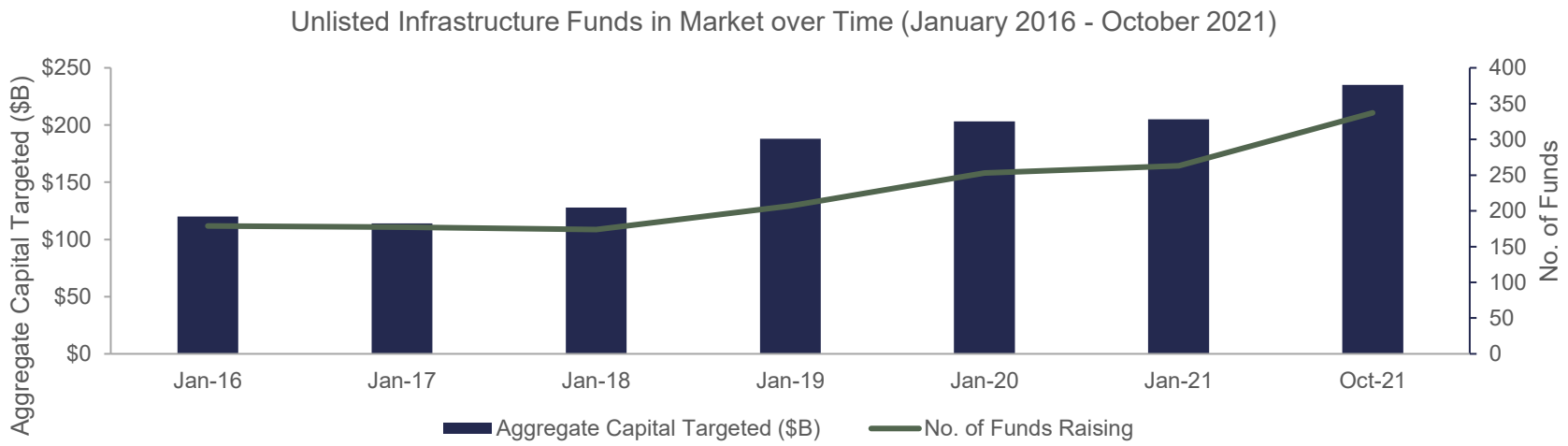


Source: Preqin, as of September 30, 2021.

wilshire.com | ©2021 Wilshire Advisors LLC

Unlisted Infrastructure – Fundraising & Investment Activity



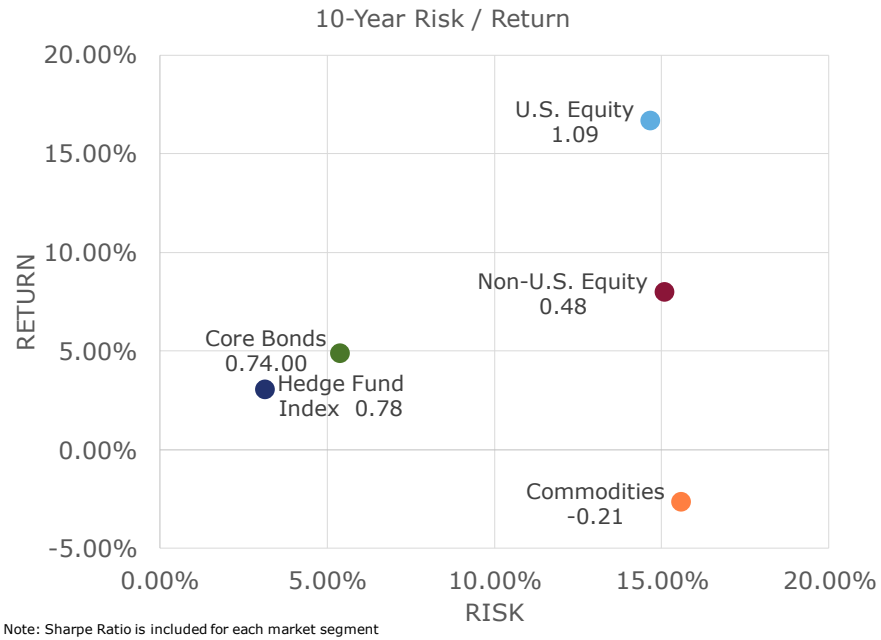


Source: Preqin, as of September 30, 2021.

wilshire.com | ©2021 Wilshire Advisors LLC

Hedge Fund Performance

As of 9/30/2021	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
Credit Suisse Hedge Fund Index	1.2	7.2	14.1	6.1	5.5	4.9
Event Driven	1.8	12.1	23.8	6.8	6.3	5.2
Global Macro	1.0	7.2	13.6	7.4	6.1	4.2
Long/Short Equity	2.3	7.8	16.0	6.8	7.1	6.8
Multi-Strategy	1.4	5.9	11.2	4.9	5.1	6.2
FT Wilshire 5000	0.1	15.6	32.4	16.2	17.0	16.7
MSCI ACWI ex-US ($G)	-2.9	6.3	24.4	8.5	9.4	8.0
Bloomberg Aggregate	0.1	-1.6	-0.9	5.4	2.9	3.0
Bloomberg Commodity Index	6.6	29.1	42.3	6.9	4.5	-2.7



Note: Sharpe Ratio is included for each market segment

Data Source: Bloomberg

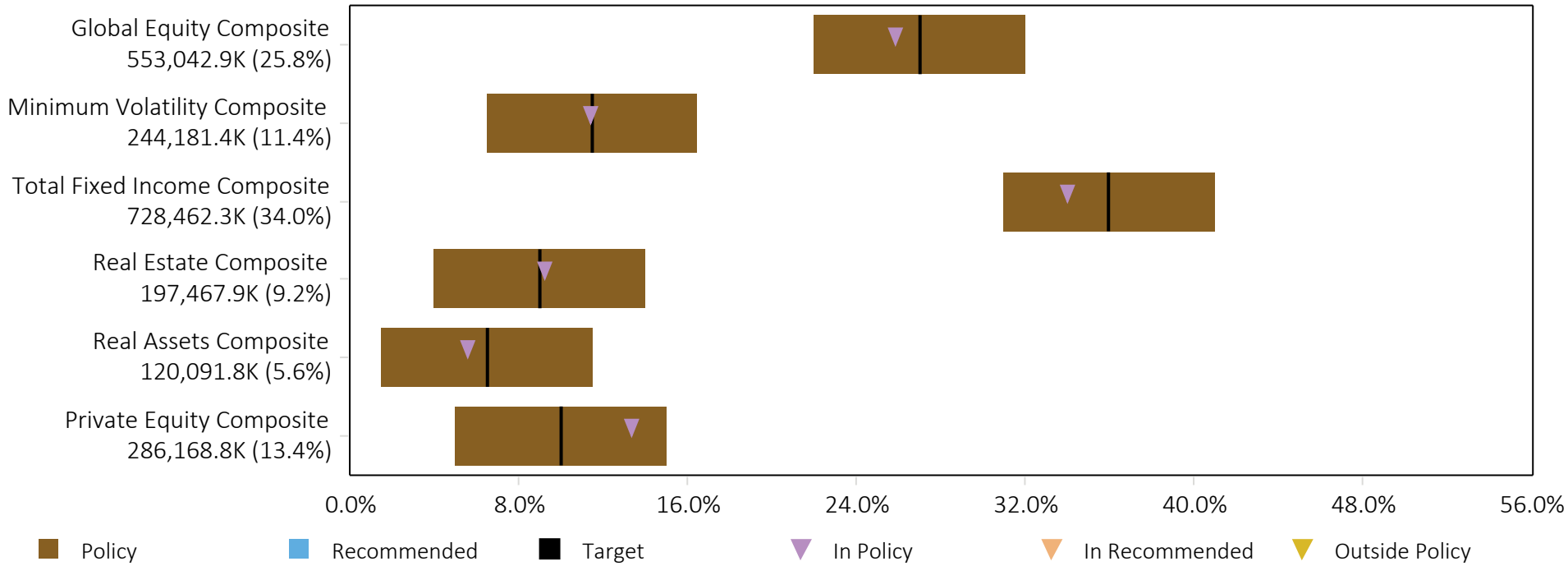
wilshire.com | ©2021 Wilshire Advisors LLC

Asset Allocation Compliance

Total Fund

Periods Ended As of September 30, 2021

Executive Summary



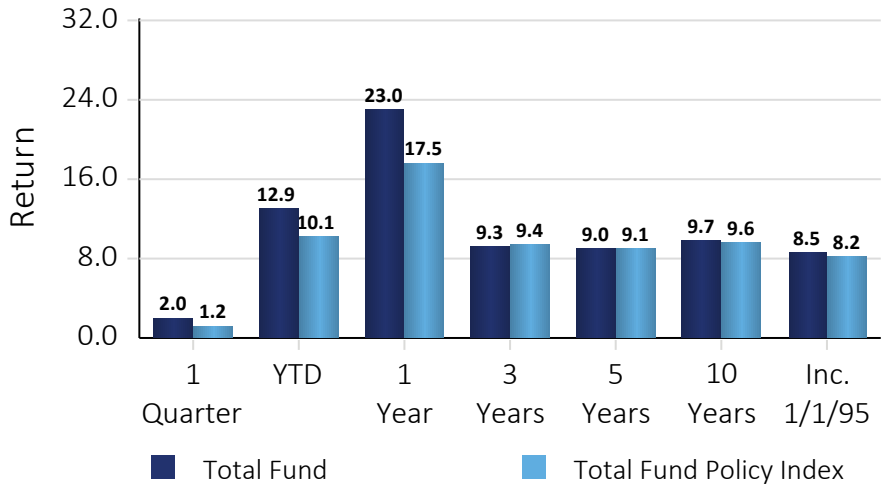
	Asset Allocation $	Asset Allocation (%)	Target Allocation (%)	Minimum Allocation (%)	Maximum Allocation (%)	Minimum Rebalance $	Maximum Rebalance $
Total Fund	2,141,249,114	100.0	100.0				
Global Equity Composite	553,042,903	25.8	27.0	22.0	32.0	-81,968,098	132,156,813
Minimum Volatility Composite	244,181,425	11.4	11.5	6.5	16.5	-105,000,232	109,124,679
Total Fixed Income Composite	728,462,307	34.0	36.0	31.0	41.0	-64,675,082	149,449,830
Real Estate Composite	197,467,923	9.2	9.0	4.0	14.0	-111,817,959	102,306,953
Real Assets Composite	120,091,807	5.6	6.5	1.5	11.5	-87,973,070	126,151,841
Private Equity Composite	286,168,848	13.4	10.0	5.0	15.0	-179,106,392	35,018,519

Total Fund Summary

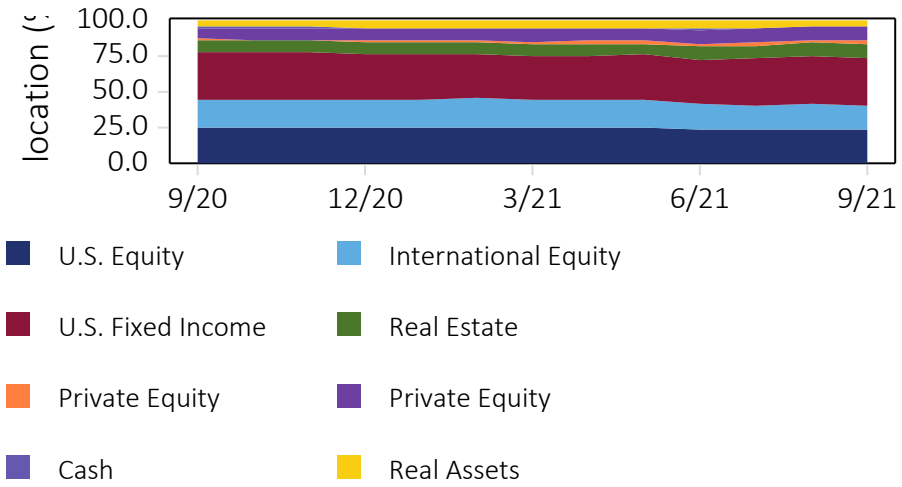
Total Fund

Periods Ended September 30, 2021

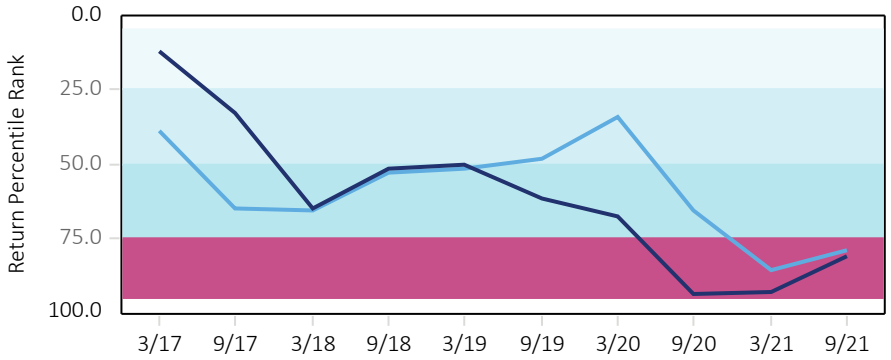
Comparative Performance



Historical Asset Allocation by Segment

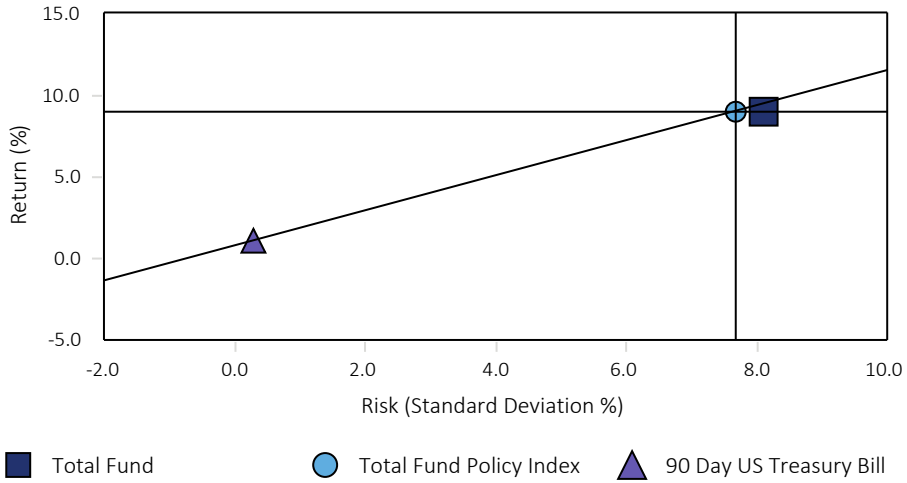


Rolling Percentile Rank: All Public Plans-Total Fund



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Total Fund	10	1 (10%)	2 (20%)	4 (40%)	3 (30%)
Benchmark	10	0 (0%)	3 (30%)	5 (50%)	2 (20%)

Risk and Return 10/1/16 - 09/30/21



Asset Allocation & Performance

Total Fund

Periods Ended September 30, 2021

	Performance (%) net of fees								Allocation	
	1 Quarter	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date	Market Value $	%
Total Fund	**1.99**	**12.91**	**22.99**	**9.27**	**8.96**	**9.74**	**9.11**	**7/1/1979**	**2,141,249,114**	**100.00**
Total Fund Policy Index	1.18	10.13	17.52	9.37	9.09	9.58				
Value Added	0.81	2.78	5.47	-0.10	-0.13	0.16				
TERS Actuarial Return	1.71	5.21	7.00	7.00	7.00	7.21	7.30			
Value Added	0.28	7.70	15.99	2.27	1.96	2.53	1.81			
Global Equity Composite	**-0.95**	**14.48**	**32.29**	**11.08**	**12.54**	**12.39**	**8.82**	**7/1/2003**	**553,042,903**	**25.83**
Global Equity Policy Index	-0.71	11.94	24.27	11.51	12.95	12.61				
Value Added	-0.24	2.54	8.02	-0.43	-0.41	-0.22				
MSCI AC World Index (Net)	-1.05	11.12	27.44	12.58	13.20	11.90	9.03			
Value Added	0.10	3.36	4.85	-1.50	-0.66	0.49	-0.21			
Minimum Volatility Composite	**0.12**	**7.38**	**14.40**	**7.94**	**8.91**		**10.20**	**10/1/2015**	**244,181,425**	**11.40**
MSCI ACWI Minimum Volatility Index (Net)	0.08	7.20	14.08	7.55	8.48		9.74			
Value Added	0.04	0.18	0.32	0.39	0.43		0.46			
Total Fixed Income Composite	**0.34**	**0.59**	**3.84**	**5.92**	**4.13**	**4.72**	**6.01**	**1/1/1994**	**728,462,307**	**34.02**
Total Fixed Income Policy Index	0.32	0.09	2.59	5.57	3.94	4.35				
Value Added	0.02	0.50	1.25	0.35	0.19	0.37				
Core Fixed Income Composite	**0.14**	**-0.97**	**0.23**	**6.21**	**3.62**	**4.01**	**8.45**	**10/1/1981**	**349,901,111**	**16.34**
Blmbg. U.S. Aggregate	0.05	-1.56	-0.90	5.35	2.94	3.01	7.69			
Value Added	0.09	0.59	1.13	0.86	0.68	1.00	0.76			
High Yield Composite	**0.61**	**3.78**	**9.11**	**5.27**	**5.03**	**5.81**	**5.95**	**9/1/2005**	**187,538,591**	**8.76**
High Yield Policy Index	0.95	4.68	11.46	6.59	6.34	7.19	7.08			
Value Added	-0.34	-0.90	-2.35	-1.32	-1.31	-1.38	-1.13			

Asset Allocation & Performance

Total Fund

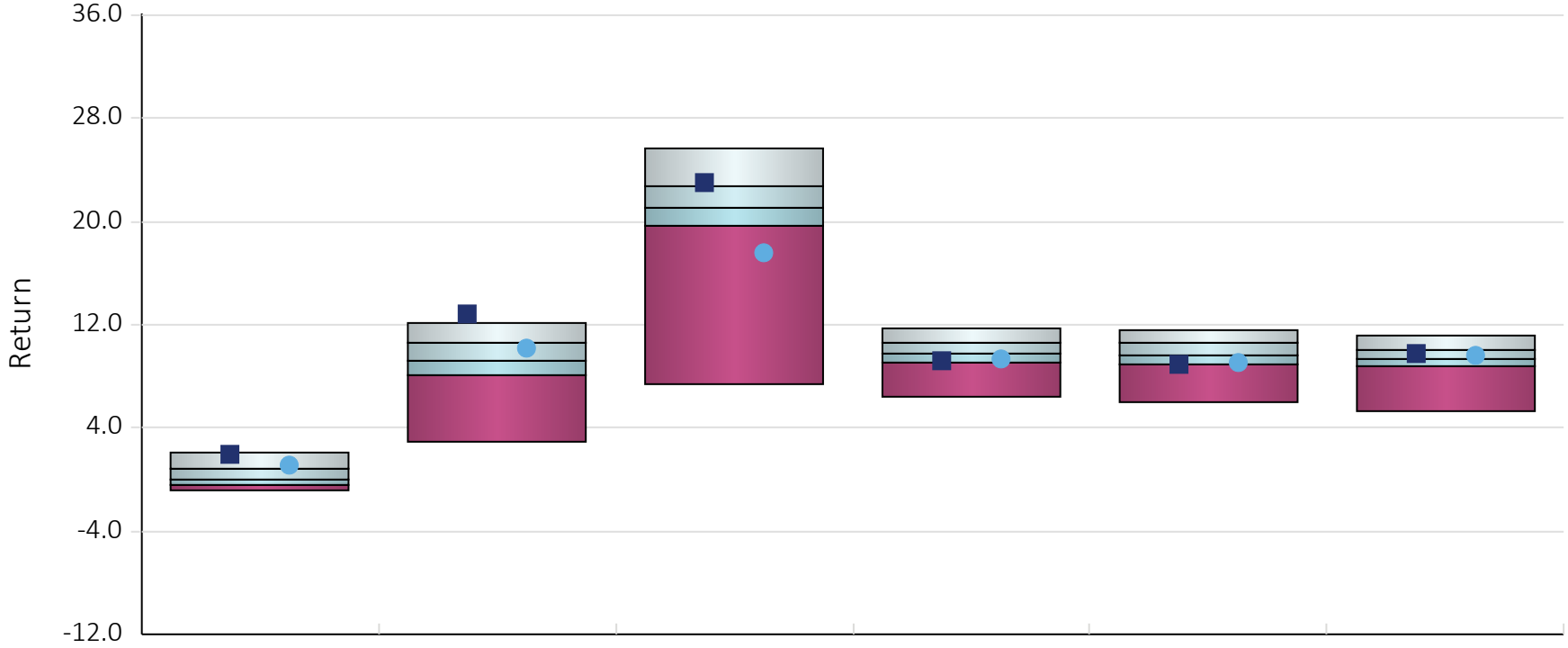
Periods Ended September 30, 2021

	Performance (%) net of fees								Allocation	
	1 Quarter	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date	Market Value $	%
Emerging Market Debt Composite	**-0.26**	**-0.70**	**7.36**	**5.66**	**4.32**		**5.88**	**3/1/2012**	**103,904,709**	**4.85**
JPM EMBI Global Diversified	-0.70	-1.36	4.36	5.65	3.89		5.13			
Value Added	0.44	0.66	3.00	0.01	0.43		0.75			
TIPS Composite	**1.73**	**3.46**	**5.11**	**7.36**	**4.29**	**3.08**	**3.54**	**6/1/2011**	**53,724,223**	**2.51**
Blmbg. U.S. TIPS	1.75	3.51	5.19	7.45	4.34	3.12	3.54			
Value Added	-0.02	-0.05	-0.08	-0.09	-0.05	-0.04	0.00			
Long-Term Fixed Income Composite	**0.48**	**-7.29**	**-9.95**				**-7.42**	**6/1/2020**	**33,393,674**	**1.56**
Blmbg. Barc. U.S. Govt: Long Term Bond	0.46	-7.40	-10.13				-7.51			
Value Added	0.02	0.11	0.18				0.09			
Real Estate Composite	**5.17**	**20.42**	**27.13**	**9.21**	**7.68**	**10.43**	**6.52**	**4/1/1988**	**197,467,923**	**9.22**
Real Estate Policy Index	4.47	18.10	24.43	8.19	6.79	10.32	9.36			
Value Added	0.70	2.32	2.70	1.02	0.89	0.11	-2.84			
Real Assets Composite	**1.26**	**26.61**	**48.60**	**0.10**	**1.61**	**6.60**	**6.60**	**10/1/2011**	**120,091,807**	**5.61**
Real Assets Policy Index	0.09	21.03	32.80	-0.06	1.23	2.75	2.75			
Value Added	1.17	5.58	15.80	0.16	0.38	3.85	3.85			
Private Equity Composite	**12.79**	**42.07**	**61.10**	**21.40**	**18.58**	**16.15**	**16.52**	**2/1/2009**	**286,168,848**	**13.36**
Private Equity Custom Benchmark	8.05	32.61	45.28	22.73	20.36	17.11	17.17			
Value Added	4.74	9.46	15.82	-1.33	-1.78	-0.96	-0.65			
Cash/Sec-Lend Composite	**0.26**	**0.88**	**1.23**	**4.25**	**6.41**	**7.48**		**1/1/2000**	**11,833,901**	**0.55**

Plan Sponsor Peer Group Analysis

Total Fund vs All Public Plans > $1B-Total Fund

Periods Ended September 30, 2021



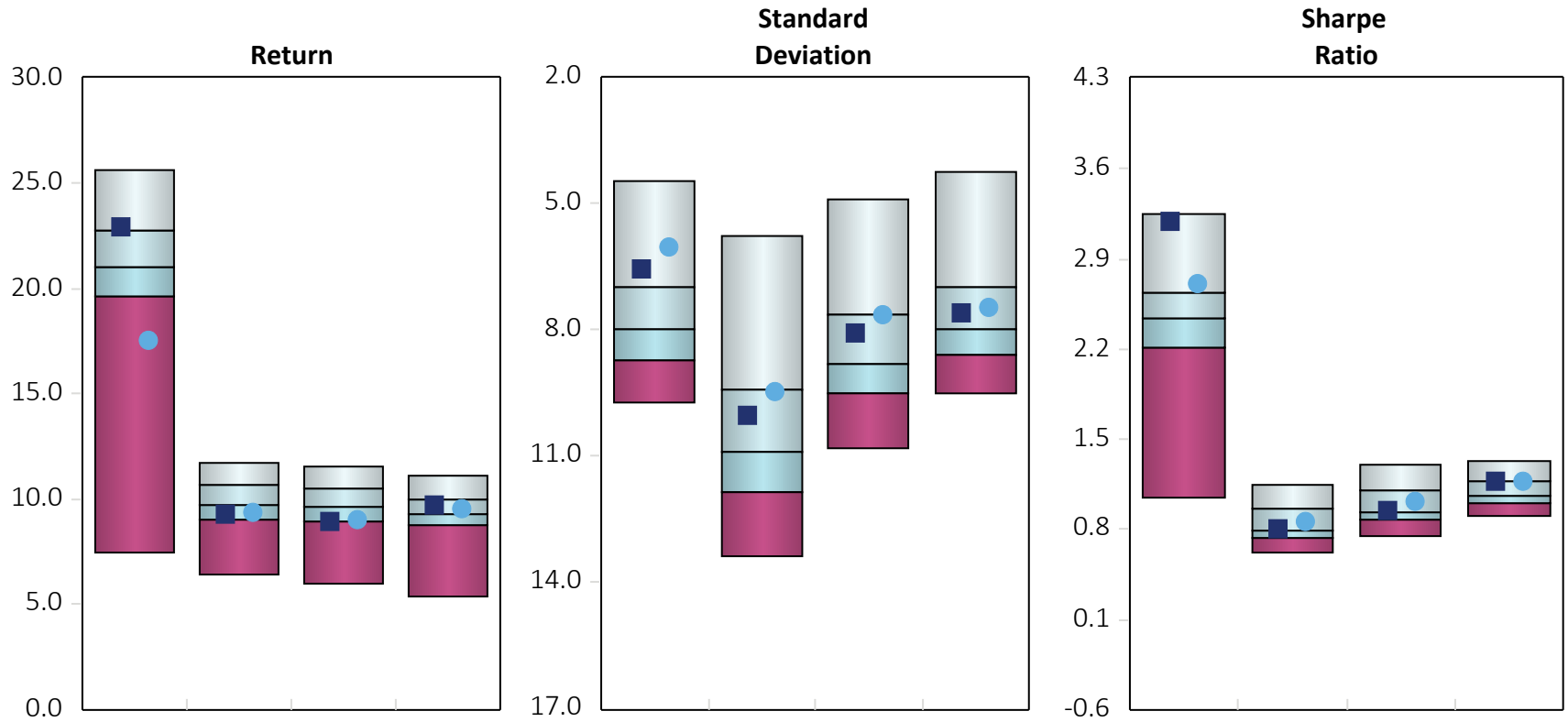
	QTD	YTD	1 Year	3 Years	5 Years	10 Years
Total Fund	1.99 (7)	12.91 (4)	22.99 (24)	9.27 (72)	8.96 (75)	9.74 (37)
Total Fund Policy Index	1.18 (19)	10.13 (37)	17.52 (90)	9.37 (69)	9.09 (73)	9.58 (41)
5th Percentile	2.09	12.10	25.69	11.78	11.60	11.14
1st Quartile	0.80	10.64	22.76	10.66	10.56	10.01
Median	0.01	9.28	21.01	9.74	9.69	9.34
3rd Quartile	-0.45	8.07	19.62	9.06	8.95	8.74
95th Percentile	-0.85	2.94	7.46	6.47	6.00	5.36
Population	70	70	70	70	70	64

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Plan Sponsor Peer Group Analysis - Multi Statistics

Total Fund vs All Public Plans > $1B-Total Fund

Periods Ended September 30, 2021



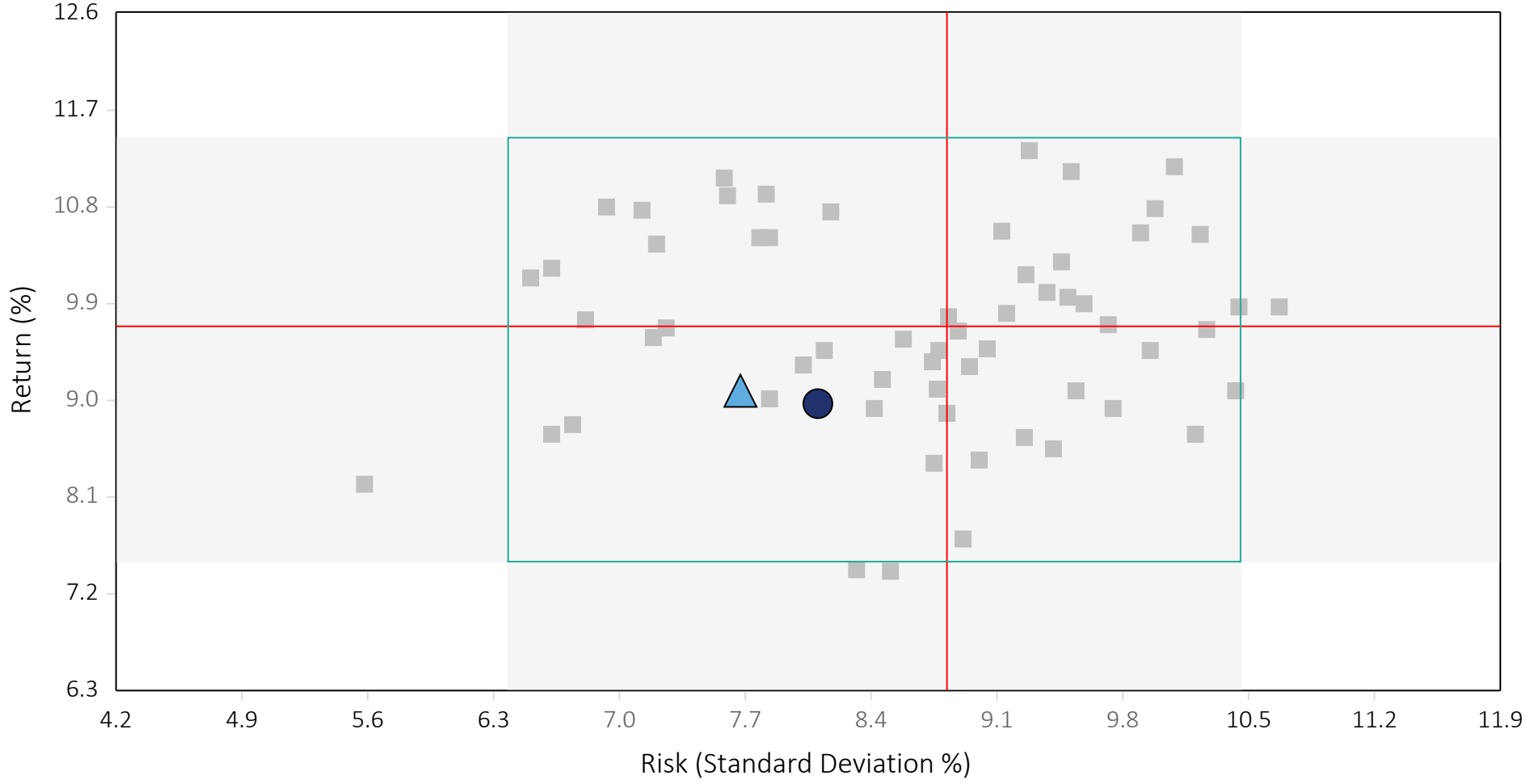
	Return				Standard Deviation				Sharpe Ratio			
	1 Year	3 Years	5 Years	10 Years	1 Year	3 Years	5 Years	10 Years	1 Year	3 Years	5 Years	10 Years
■ Total Fund	22.99 (24)	9.27 (72)	8.96 (75)	9.74 (37)	6.58 (15)	10.04 (34)	8.11 (32)	7.60 (41)	3.19 (6)	0.81 (43)	0.95 (48)	1.18 (25)
● Total Fund Policy Index	17.52 (90)	9.37 (69)	9.09 (73)	9.58 (41)	6.05 (9)	9.47 (25)	7.67 (25)	7.46 (37)	2.71 (22)	0.86 (37)	1.01 (33)	1.18 (24)
5th Percentile	25.69	11.78	11.60	11.14	4.49	5.77	4.91	4.26	3.25	1.14	1.30	1.33
1st Quartile	22.76	10.66	10.56	10.01	6.99	9.45	7.65	7.02	2.64	0.96	1.10	1.18
Median	21.01	9.74	9.69	9.34	7.99	10.89	8.83	8.00	2.44	0.79	0.94	1.06
3rd Quartile	19.62	9.06	8.95	8.74	8.73	11.88	9.54	8.61	2.21	0.73	0.87	1.01
95th Percentile	7.46	6.47	6.00	5.36	9.75	13.40	10.81	9.54	1.04	0.62	0.75	0.91
Population	70	70	70	64	70	70	70	64	70	70	70	64

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Plan Sponsor Scattergram

Total Fund vs All Public Plans > $1B-Total Fund

Periods Ended 5 Years Ending September 30, 2021



	Return	Standard Deviation
Total Fund	8.96	8.11
Total Fund Policy Index	9.09	7.67
Median	9.69	8.83

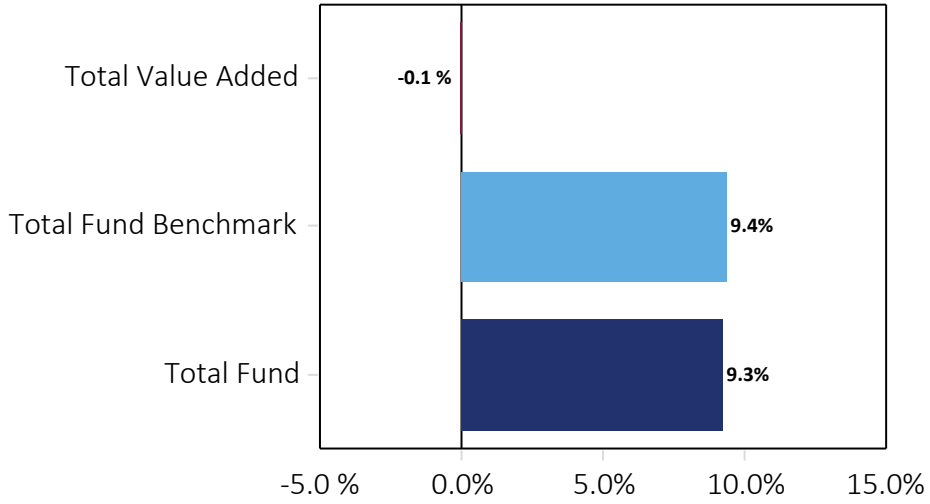
Calculation based on monthly periodicity.

Total Fund Attribution

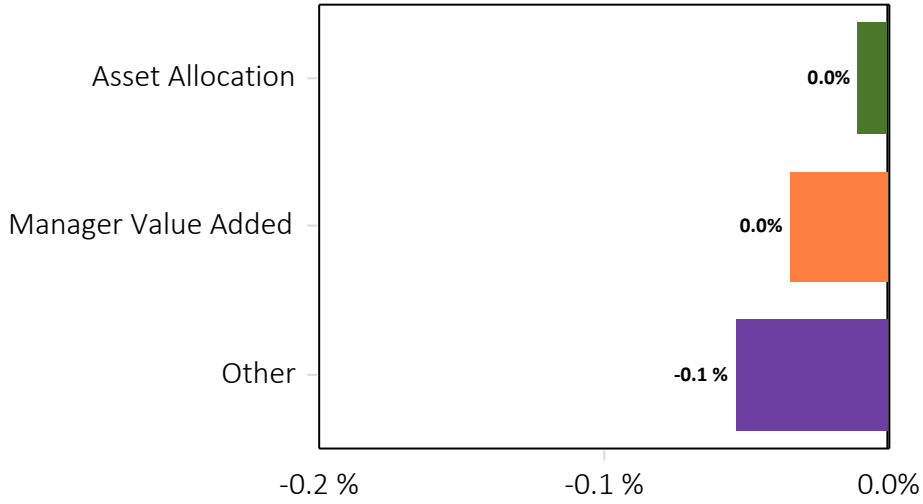
Total Fund

Periods Ended 3 Years Ending September 30, 2021

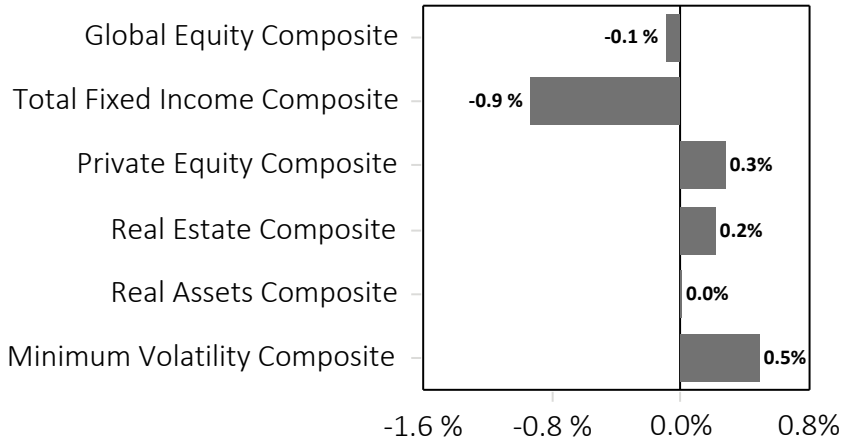
Total Fund Performance



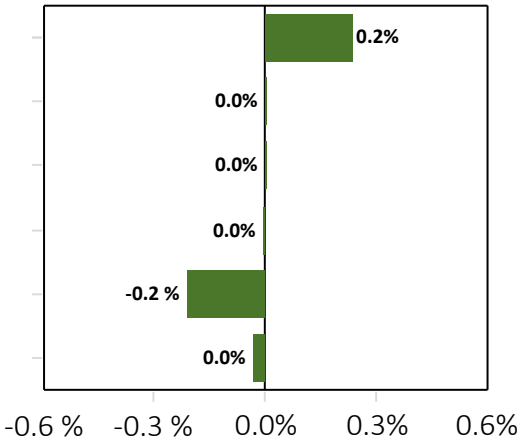
Total Value Added:-0.1 %



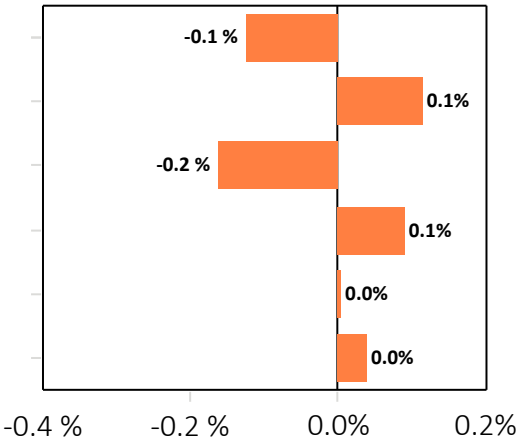
Total Asset Allocation:0.0%



Asset Allocation Value Added:0.0%



Total Manager Value Added:0.0%



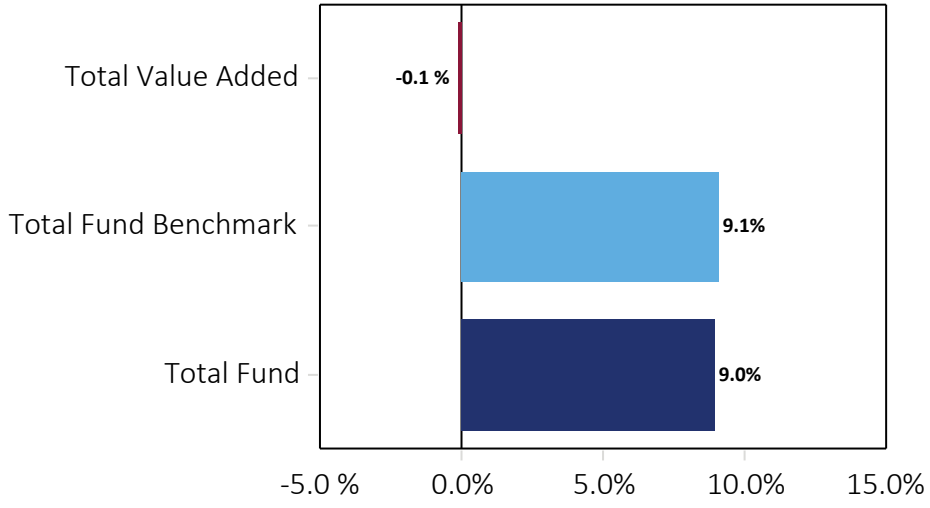
Average Active Weight | Asset Allocation Value Added | Manager Value Added

Total Fund Attribution

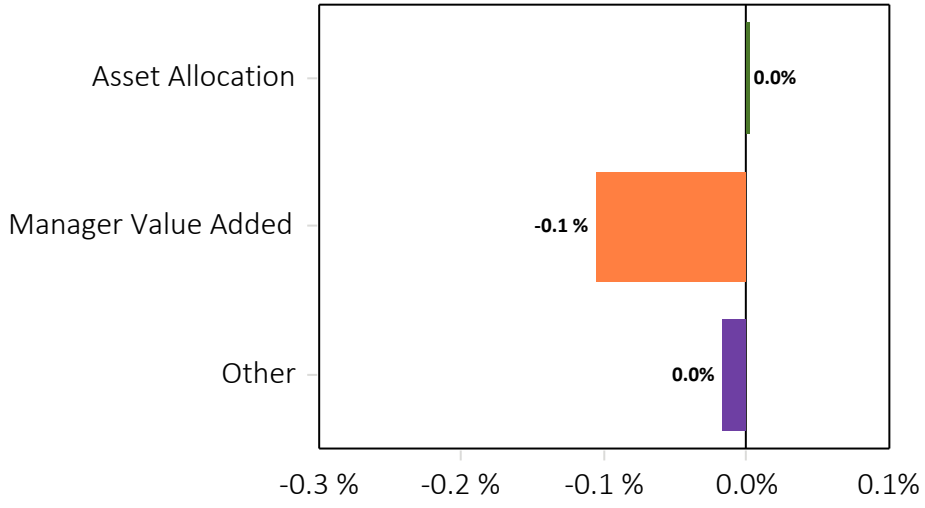
Total Fund

Periods Ended 5 Years Ending September 30, 2021

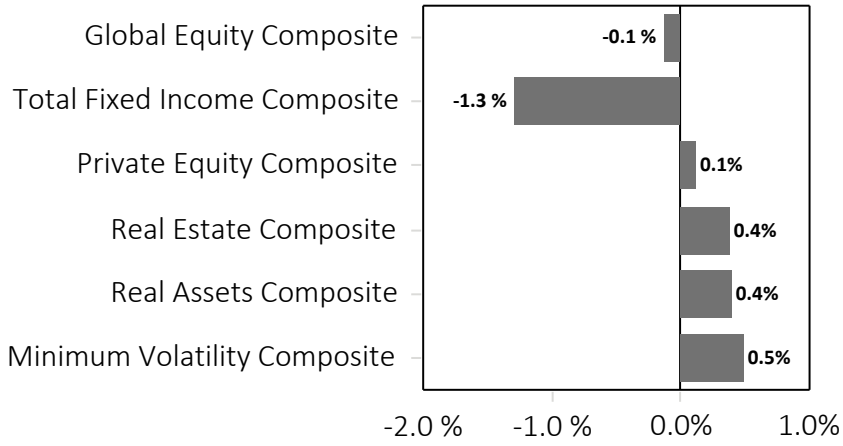
Total Fund Performance



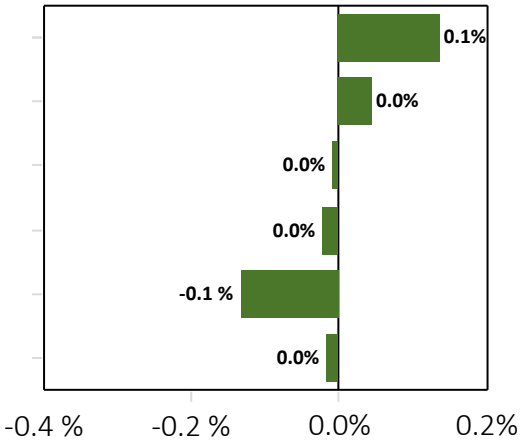
Total Value Added:-0.1 %



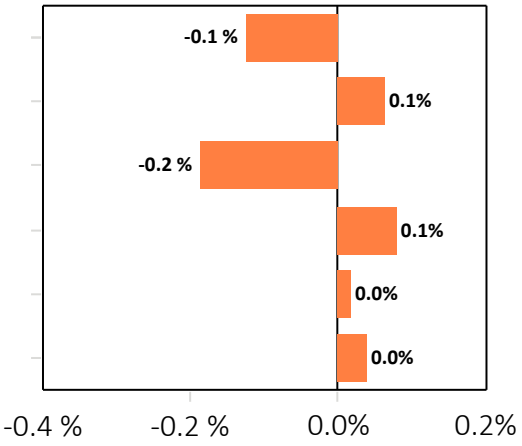
Total Asset Allocation:0.0%



Asset Allocation Value Added:0.0%



Total Manager Value Added:-0.1 %



Average Active Weight | Asset Allocation Value Added | Manager Value Added

Asset Allocation & Performance

Global Equity Composite

Periods Ended September 30, 2021

	Performance (%) net of fees								Allocation	
	1 Quarter	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date	Market Value $	%
Global Equity Composite	**-0.95**	**14.48**	**32.29**	**11.08**	**12.54**	**12.39**	**8.82**	**7/1/2003**	**553,042,903**	**100.00**
Global Equity Policy Index	-0.71	11.94	24.27	11.51	12.95	12.61				
Value Added	-0.24	2.54	8.02	-0.43	-0.41	-0.22				
DFA World Core Equity Portfolio	**-1.29**	**13.07**	**32.73**	**11.16**	**12.53**		**8.73**	**7/1/2014**	**62,834,460**	**11.36**
MSCI AC World Index (Net)	-1.05	11.12	27.44	12.58	13.20		9.24			
Value Added	-0.24	1.95	5.29	-1.42	-0.67		-0.51			
NTGI MSCI ACWI IMI Fund	**-1.28**	**11.35**	**28.81**	**12.65**	**13.36**		**9.85**	**8/1/2014**	**259,089,221**	**46.85**
MSCI AC World IMI (Net)	-1.11	11.42	28.92	12.38	13.06		9.52			
Value Added	-0.17	-0.07	-0.11	0.27	0.30		0.33			
PIMCO RAE Fundamental Global Fund	**-2.78**	**14.04**	**37.31**	**7.01**	**9.57**		**6.16**	**7/1/2014**	**152,132,847**	**27.51**
MSCI AC World Index (Net)	-1.05	11.12	27.44	12.58	13.20		9.24			
Value Added	-1.73	2.92	9.87	-5.57	-3.63		-3.08			
INTECH Global AC Enhanced Index Fund	**-0.71**	**12.15**	**28.00**	**12.91**	**13.82**		**9.58**	**7/1/2014**	**73,702,810**	**13.33**
MSCI AC World Index (Net)	-1.05	11.12	27.44	12.58	13.20		9.24			
Value Added	0.34	1.03	0.56	0.33	0.62		0.34			

Asset Allocation & Performance

Minimum Volatility Composite

Periods Ended September 30, 2021

	Performance (%) net of fees							Allocation	
	1 Quarter	YTD	1 Year	3 Years	5 Years	Since Inception	Inception Date	Market Value $	%
Minimum Volatility Composite	0.12	7.38	14.40	7.94	8.91	10.20	10/1/2015	244,181,425	100.00
MSCI ACWI Minimum Volatility Index (Net)	0.08	7.20	14.08	7.55	8.48	9.74			
Value Added	0.04	0.18	0.32	0.39	0.43	0.46			
Blackrock MSCI ACWI Minimum Volatility	0.12	7.38	14.40	7.94	8.91	10.20	10/1/2015	244,181,425	100.00
MSCI ACWI Minimum Volatility Index (Net)	0.08	7.20	14.08	7.55	8.48	9.74			
Value Added	0.04	0.18	0.32	0.39	0.43	0.46			

Asset Allocation & Performance

Total Fixed Income Composite

Periods Ended September 30, 2021

	Performance (%) net of fees								Allocation	
	1 Quarter	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date	Market Value $	%
Total Fixed Income Composite	**0.34**	**0.59**	**3.84**	**5.92**	**4.13**	**4.72**	**6.01**	**1/1/1994**	**728,462,307**	**100.00**
Total Fixed Income Policy Index	0.32	0.09	2.59	5.57	3.94	4.35				
Value Added	0.02	0.50	1.25	0.35	0.19	0.37				
Core Fixed Income Composite	**0.14**	**-0.97**	**0.23**	**6.21**	**3.62**	**4.01**	**8.45**	**10/1/1981**	**349,901,111**	**48.03**
Blmbg. U.S. Aggregate	0.05	-1.56	-0.90	5.35	2.94	3.01	7.69			
Value Added	0.09	0.59	1.13	0.86	0.68	1.00	0.76			
High Yield Composite	**0.61**	**3.78**	**9.11**	**5.27**	**5.03**	**5.81**	**5.95**	**9/1/2005**	**187,538,591**	**25.74**
High Yield Policy Index	0.95	4.68	11.46	6.59	6.34	7.19	7.08			
Value Added	-0.34	-0.90	-2.35	-1.32	-1.31	-1.38	-1.13			
Emerging Market Debt Composite	**-0.26**	**-0.70**	**7.36**	**5.66**	**4.32**		**5.88**	**3/1/2012**	**103,904,709**	**14.26**
JPM EMBI Global Diversified	-0.70	-1.36	4.36	5.65	3.89		5.13			
Value Added	0.44	0.66	3.00	0.01	0.43		0.75			
TIPS Composite	**1.73**	**3.46**	**5.11**	**7.36**	**4.29**	**3.08**	**3.54**	**6/1/2011**	**53,724,223**	**7.38**
Blmbg. U.S. TIPS	1.75	3.51	5.19	7.45	4.34	3.12	3.54			
Value Added	-0.02	-0.05	-0.08	-0.09	-0.05	-0.04	0.00			
Long-Term Fixed Income Composite	**0.48**	**-7.29**	**-9.95**				**-7.89**	**7/1/2020**	**33,393,674**	**4.58**
Blmbg. Barc. U.S. Gov: Long Term Bond	0.46	-7.40	-10.13				-8.09			
Value Added	0.02	0.11	0.18				0.20			

Asset Allocation & Performance

Core Fixed Income Composite

Periods Ended September 30, 2021

	Performance (%) net of fees								Allocation	
	1 Quarter	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date	Market Value $	%
Core Fixed Income Composite	0.14	-0.97	0.23	6.21	3.62	4.01	8.45	10/1/1981	349,901,111	100.00
Blmbg. U.S. Aggregate	0.05	-1.56	-0.90	5.35	2.94	3.01	7.69			
Value Added	0.09	0.59	1.13	0.86	0.68	1.00	0.76			
BlackRock US Debt Index Fund	0.06	-1.60	-0.94	5.29	2.89	2.99	3.52	5/1/2010	61,265,158	17.51
Blmbg. U.S. Aggregate	0.05	-1.56	-0.90	5.35	2.94	3.01	3.53			
Value Added	0.01	-0.04	-0.04	-0.06	-0.05	-0.02	-0.01			
Metropolitan West	0.16	-0.85	0.47	6.25	3.68	4.14	5.61	4/1/2002	288,635,953	82.49
Blmbg. U.S. Aggregate	0.05	-1.56	-0.90	5.35	2.94	3.01	4.44			
Value Added	0.11	0.71	1.37	0.90	0.74	1.13	1.17			

Asset Allocation & Performance

Long-Term Fixed Income Composite

Periods Ended September 30, 2021

	Performance (%) net of fees					Allocation	
	1 Quarter	YTD	1 Year	Since Inception	Inception Date	Market Value $	%
Long-Term Fixed Income Composite	0.48	-7.29	-9.95	-7.89	7/1/2020	33,393,674	100.00
Blmbg. Barc. U.S. Gov: LT Bond Index	0.46	-7.40	-10.13	-8.09			
Value Added	0.02	0.11	0.18	0.20			
BlackRock Long-Term Govt Bond	0.48	-7.29	-9.95	-7.89	7/1/2020	33,393,674	100.00
Blmbg. Barc. U.S. Gov: LT Bond Index	0.46	-7.40	-10.13	-8.09			
Value Added	0.02	0.11	0.18	0.20			

Asset Allocation & Performance

High Yield Composite

Periods Ended September 30, 2021

	Performance (%) net of fees								Allocation	
	1 Quarter	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date	Market Value $	%
High Yield Composite	**0.61**	**3.78**	**9.11**	**5.27**	**5.03**	**5.81**	**5.95**	**9/1/2005**	**187,538,591**	**100.00**
High Yield Policy Index	0.95	4.68	11.46	6.59	6.34	7.19	7.08			
Value Added	-0.34	-0.90	-2.35	-1.32	-1.31	-1.38	-1.13			
ICE BofAML High Yield BB-B Constrained Index	0.94	3.84	9.76	6.89	6.15	7.08	6.73			
Value Added	-0.33	-0.06	-0.65	-1.62	-1.12	-1.27	-0.78			
Eaton Vance Senior Loan Fund	**1.14**	**3.81**	**7.16**	**3.24**	**4.07**	**4.30**	**3.95**	**7/1/2011**	**42,229,706**	**22.52**
CSFB Leveraged Loan	1.13	4.65	8.46	4.09	4.64	5.04	4.52			
Value Added	0.01	-0.84	-1.30	-0.85	-0.57	-0.74	-0.57			
Eaton Vance Senior Loan Plus Fund	**1.04**	**4.18**	**8.21**	**3.69**			**4.01**	**2/1/2017**	**22,029,177**	**11.75**
CSFB Leveraged Loan	1.13	4.65	8.46	4.09			4.36			
Value Added	-0.09	-0.47	-0.25	-0.40			-0.35			
Neuberger Berman HY- SL	**0.36**	**3.70**	**9.86**	**6.17**	**5.45**		**5.96**	**6/1/2012**	**123,279,707**	**65.74**
ICE BofAML US High Yield Master II Constrained	0.95	4.68	11.46	6.59	6.34		6.59			
Value Added	-0.59	-0.98	-1.60	-0.42	-0.89		-0.63			

Asset Allocation & Performance

TIPS Composite

Periods Ended September 30, 2021

	Performance (%) net of fees								Allocation	
	1 Quarter	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date	Market Value $	%
TIPS Composite	1.73	3.46	5.11	7.36	4.29	3.08	3.54	6/1/2011	53,724,223	100.00
Blmbg. U.S. TIPS	1.75	3.51	5.19	7.45	4.34	3.12	3.54			
Value Added	-0.02	-0.05	-0.08	-0.09	-0.05	-0.04	0.00			
BlackRock US TIPS Index Fund	1.73	3.46	5.11	7.38	4.30	3.08	3.54	5/1/2011	53,724,223	100.00
Blmbg. U.S. TIPS	1.75	3.51	5.19	7.45	4.34	3.12	3.55			
Value Added	-0.02	-0.05	-0.08	-0.07	-0.04	-0.04	-0.01			

Asset Allocation & Performance

Emerging Market Debt Composite

Periods Ended September 30, 2021

	Performance (%) net of fees							Allocation	
	1 Quarter	YTD	1 Year	3 Years	5 Years	Since Inception	Inception Date	Market Value $	%
Emerging Market Debt Composite	-0.26	-0.70	7.36	5.66	4.32	5.88	3/1/2012	103,904,709	100.00
JPM EMBI Global Diversified	-0.70	-1.36	4.36	5.65	3.89	5.13			
Value Added	0.44	0.66	3.00	0.01	0.43	0.75			
Prudential EMD	-0.26	-0.70	7.36	5.66	4.32	5.88	3/1/2012	103,904,709	100.00
JPM EMBI Global Diversified	-0.70	-1.36	4.36	5.65	3.89	5.13			
Value Added	0.44	0.66	3.00	0.01	0.43	0.75			

Asset Allocation & Performance

Real Estate Composite

Periods Ended September 30, 2021

	Performance (%) net of fees								Allocation	
	1 Quarter	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date	Market Value $	%
Real Estate Composite	**5.17**	**20.42**	**27.13**	**9.21**	**7.68**	**10.43**	**6.52**	**4/1/1988**	**197,467,923**	**100.00**
Real Estate Policy Index	4.47	18.10	24.43	8.19	6.79	10.32	9.36			
Value Added	0.70	2.32	2.70	1.02	0.89	0.11	-2.84			
Wilshire U.S. REIT Index	1.64	24.79	38.04	10.39	6.97	11.30	9.43			
Value Added	3.53	-4.37	-10.91	-1.18	0.71	-0.87	-2.91			
Adelante Capital Mgmnt	**2.60**	**26.55**	**40.29**	**12.64**	**8.53**	**11.98**	**9.56**	**11/1/1997**	**86,627,834**	**43.87**
Wilshire U.S. REIT Index	1.64	24.79	38.04	10.39	6.97	11.30	9.24			
Value Added	0.96	1.76	2.25	2.25	1.56	0.68	0.32			
Wilshire REIT Index + 1%	1.89	25.73	39.42	11.50	8.04	12.42	10.33			
Value Added	0.71	0.82	0.87	1.14	0.49	-0.44	-0.77			
INVESCO Core Real Estate U.S.A., LLC	**7.36**	**13.46**	**14.39**	**5.62**	**6.52**	**8.76**	**9.61**	**12/1/2010**	**110,840,089**	**56.13**
Invesco Policy Index	6.41	12.41	13.64	6.13	6.56	9.02	9.80			
Value Added	0.95	1.05	0.75	-0.51	-0.04	-0.26	-0.19			

Asset Allocation & Performance

Real Assets Composite

Periods Ended September 30, 2021

	Performance (%) net of fees								Allocation	
	1 Quarter	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date	Market Value $	%
Real Assets Composite	**1.26**	**26.61**	**48.60**	**0.10**	**1.61**	**6.60**	**6.60**	**10/1/2011**	**120,091,807**	**100.00**
Real Assets Policy Index	0.09	21.03	32.80	-0.06	1.23	2.75	2.75			
Value Added	1.17	5.58	15.80	0.16	0.38	3.85	3.85			
Tortoise MLP	**-0.43**	**37.57**	**74.79**	**-3.87**	**-1.79**	**4.04**	**4.04**	**10/1/2011**	**63,391,872**	**52.79**
Policy Index	-1.89	38.03	65.84	-9.07	-5.35	-0.33	-0.33			
Value Added	1.46	-0.46	8.95	5.20	3.56	4.37	4.37			
Pantheon Global Infrastructure Fund II	**3.02**	**15.21**	**20.25**	**9.67**	**11.46**		**17.91**	**12/1/2014**	**22,012,145**	**18.33**
CPI + 3%	1.71	7.67	8.55	5.89	5.66		5.28			
Value Added	1.31	7.54	11.70	3.78	5.80		12.63			
Pantheon Global Infrastructure Fund III	**4.76**	**23.17**	**35.46**	**4.24**			**6.78**	**3/1/2018**	**21,803,243**	**18.16**
CPI + 3%	1.71	7.67	8.55	5.89			5.82			
Value Added	3.05	15.50	26.91	-1.65			0.96			
Melody Infrastructure	**2.04**	**5.95**					**5.95**	**1/1/2021**	**12,884,547**	**10.73**
CPI + 3%	1.71	7.67					7.67			
Value Added	0.33	-1.72					-1.72			

Asset Allocation & Performance

Private Equity Composite

Periods Ended September 30, 2021

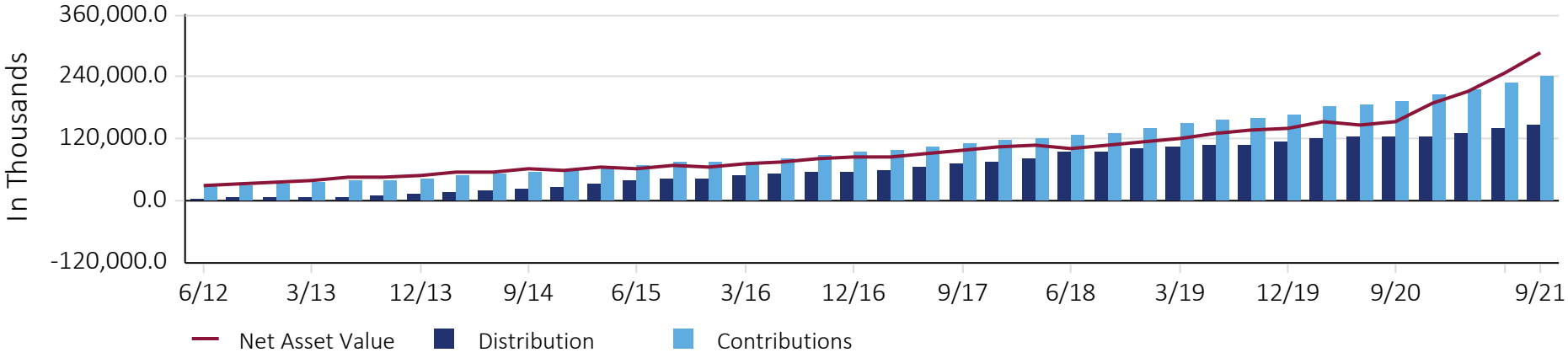
	Performance (%) net of fees								Allocation	
	1 Quarter	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date	Market Value $	%
Private Equity Composite	12.79	42.07	61.10	21.40	18.58	16.15	16.52	2/1/2009	286,168,848	100.00
Private Equity Custom Benchmark	8.05	32.61	45.28	22.73	20.36	17.11	17.17			
Value Added	4.74	9.46	15.82	-1.33	-1.78	-0.96	-0.65			
NTGI MSCI ACWI IMI Fund - PE	0.79	13.65	31.44	13.41	13.82		10.17	5/1/2014		0.00
MSCI AC World IMI (Net)	-1.11	11.42	28.92	12.38	13.06		9.57			
Value Added	1.90	2.23	2.52	1.03	0.76		0.60			
Pantheon Global Secondary Fund IV	11.55	20.08	29.94	5.86	9.68	9.30	13.90	12/1/2010	2,327,709	0.81
Pantheon Multi-Strategy Fund	14.51	47.63	72.78	26.08	20.99		19.86	3/1/2016	181,962,051	63.59
Hamilton Lane Fund VII (Series A)	6.52	47.92	60.30	17.99	15.89	12.14	12.12	6/1/2011	4,847,781	1.69
Hamilton Lane Fund VII (Series B)	5.42	9.90	4.88	-5.05	0.51	1.62	1.73	6/1/2011	2,271,734	0.79
HarbourVest Dover Street VII	3.96	16.78	26.62	-1.22	-1.95	1.51	5.18	6/1/2009	1,476,536	0.52
HarbourVest Dover Street VIII	7.65	30.48	41.78	18.05	18.22		17.30	6/1/2013	14,894,388	5.20
HarbourVest HIPEP VI Partnership	1.54	31.68	45.78	20.37	19.74	13.19	9.17	9/1/2010	7,456,763	2.61
HarbourVest IX-Venture Fund	13.85	49.58	90.45	43.67	31.49	23.27	23.27	10/1/2011	4,264,785	1.49
HarbourVest IX-Buyout Fund	11.61	38.69	55.16	27.67	25.74	14.26	14.26	10/1/2011	4,209,296	1.47
HarbourVest IX-Credit Opp Fund	8.33	13.78	16.72	8.69	12.02	14.62	14.62	10/1/2011	474,180	0.17
Pantheon 2019 Fund	13.59	38.02	27.70					12/1/2019	61,983,625	21.66

Private Equity Composite Overview

Private Equity Composite

Periods Ended As of September 30, 2021

Cash Flow Analysis



Private Equity Portfolio

Partnerships	Market Value $	Total Contribution $	Total Distribution $	IRR (%)	TVPI Multiple (%)	KS-PME
Hamilton Lane Fund VII (Series A)	4,847,781	8,090,902	9,872,739	12.4	1.8	1.1
Hamilton Lane Fund VII (Series B)	2,271,734	5,439,349	4,249,557	3.1	1.2	0.8
HarbourVest Dover Street VII	1,476,536	19,117,228	26,223,390	9.6	1.4	1.0
HarbourVest HIPEP VI Partnership	7,456,763	7,018,732	7,093,039	14.3	2.1	1.2
HarbourVest IX-Venture Fund	4,264,785	2,090,000	2,487,444	24.0	3.2	1.9
HarbourVest IX-Buyout Fund	4,209,296	3,836,250	4,094,543	19.9	2.2	1.4
HarbourVest IX-Credit Opp Fund	474,180	640,000	521,383	12.1	1.6	1.0
HarbourVest Dover Street VIII	14,894,388	36,800,000	48,796,245	16.3	1.7	1.2
Pantheon Multi-Strategy Fund	181,962,051	108,532,618	24,960,000	24.3	1.9	1.3
Pantheon Global Secondary Fund IV	2,327,709	13,280,000	19,113,724	13.4	1.6	1.1
Pantheon 2019 Fund	61,983,625	49,805,513		34.9	1.2	1.1
Private Equity Composite	286,168,848	254,650,592	147,412,064	19.7	1.7	1.3

Total Value to Paid in (TVPI): The ratio of the current value of remaining investments within a fund, plus the total value of all distributions to date, relative to the total amount of capital paid into the fund to date.

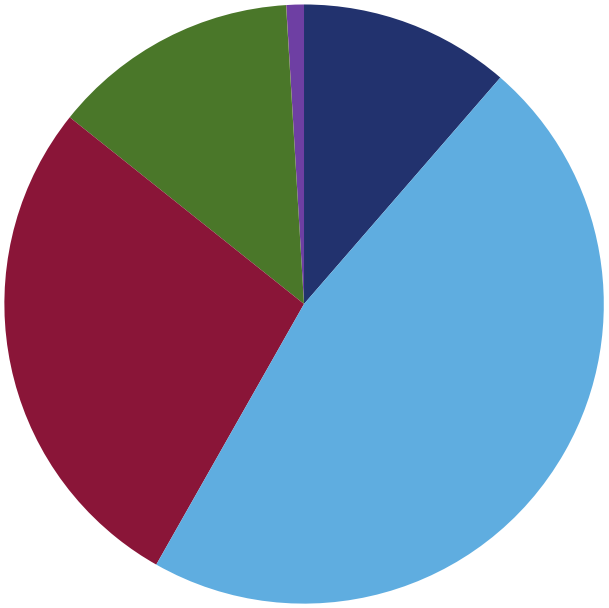
Kaplan Scholar PME: The Public Market Equivalent provides a market-adjusted cash multiple, where a value above one means out-performance of- and a value below one means under-performance of a public market index. For this calculation, we used the MSCI ACWI IMI as the Public Market Equivalent index.

Asset Allocation By Manager

Global Equity Composite

Periods Ended September 30, 2021

Sep-2021 : 553,042,903

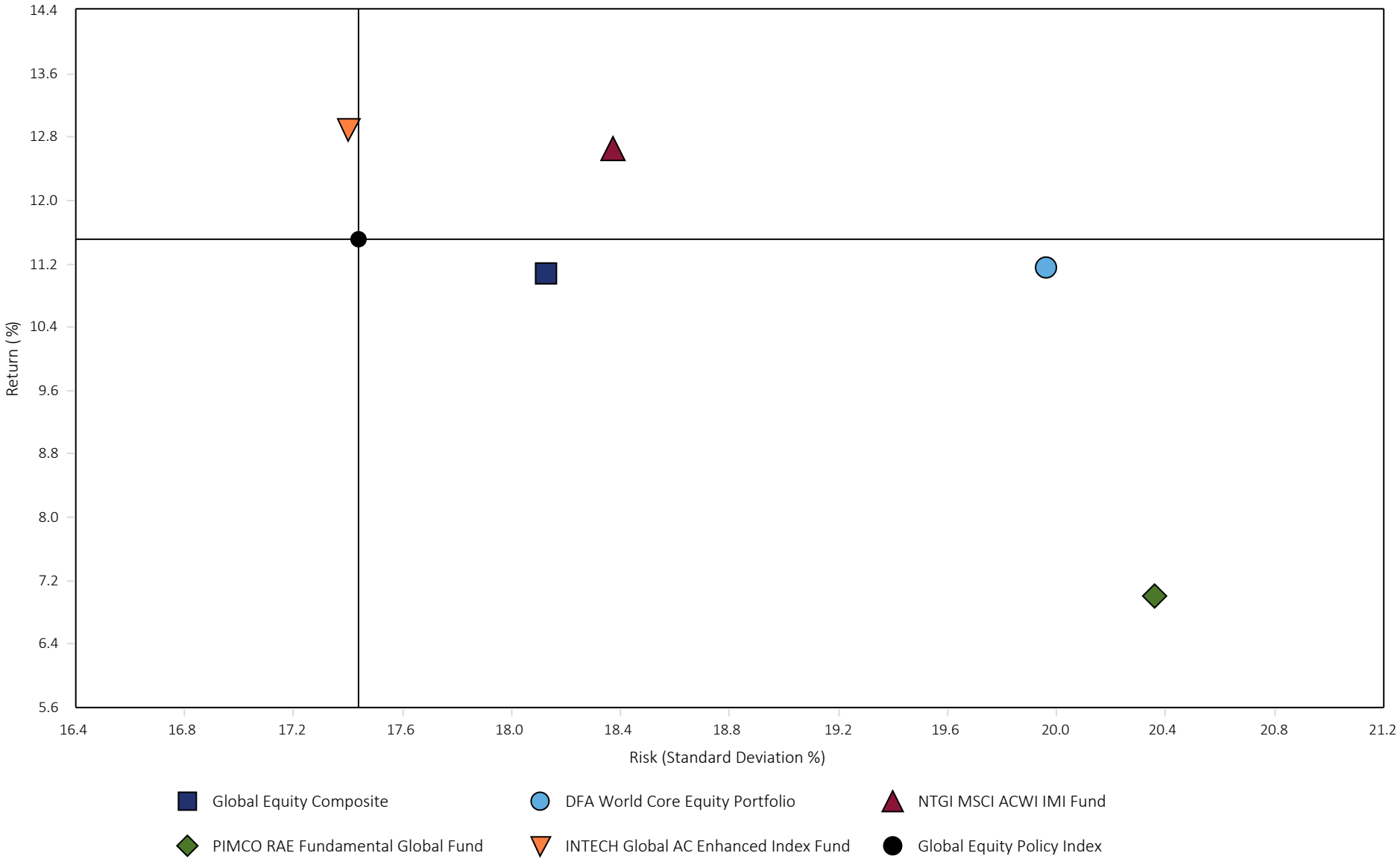


	Market Value $	Allocation (%)
DFA World Core Equity Portfolio	62,834,460	11.4
NTGI MSCI ACWI IMI Fund	259,089,221	46.8
PIMCO RAE Fundamental Global Fund	152,132,847	27.5
INTECH Global AC Enhanced Index Fund	73,702,810	13.3
TT International	1,533	0.0
Currency Overlay Account	5,282,033	1.0

Risk vs. Return

Global Equity Composite

Periods Ended 3 Years Ending September 30, 2021



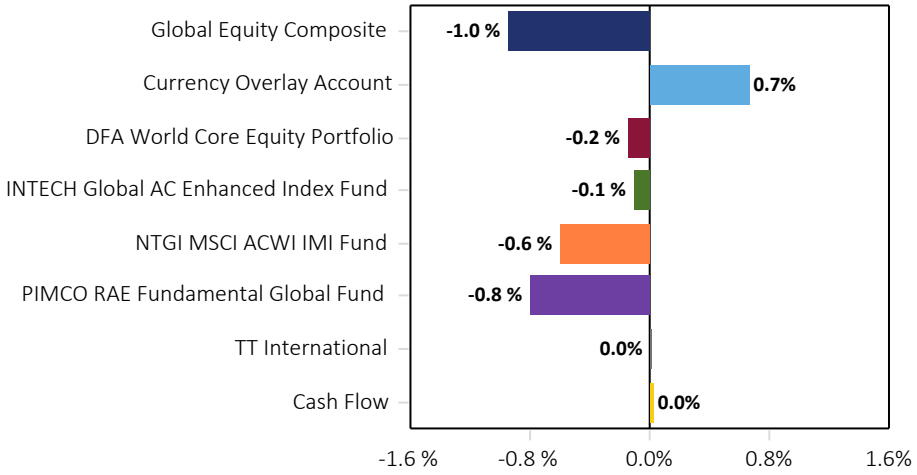
Calculation based on monthly periodicity.

Return and Risk Contribution

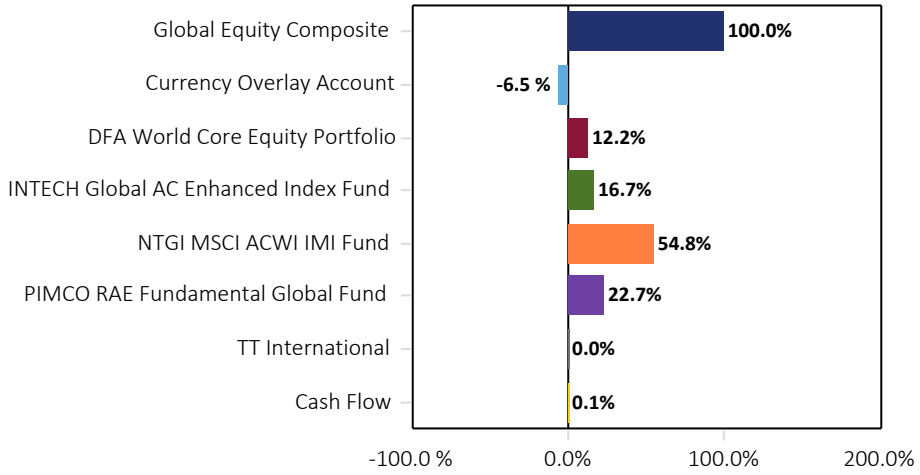
Global Equity Composite

Periods Ended 1 Quarter September 30, 2021

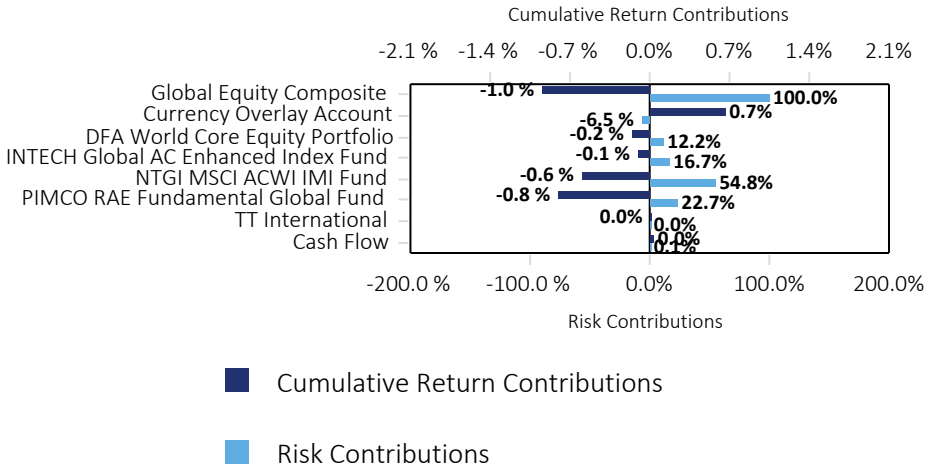
Cumulative Return Contributions



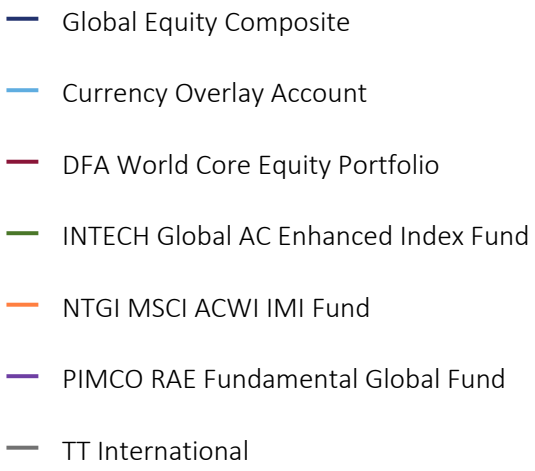
Risk Contributions



Cumulative Return and Risk Contributions



Cumulative Return Contributions History

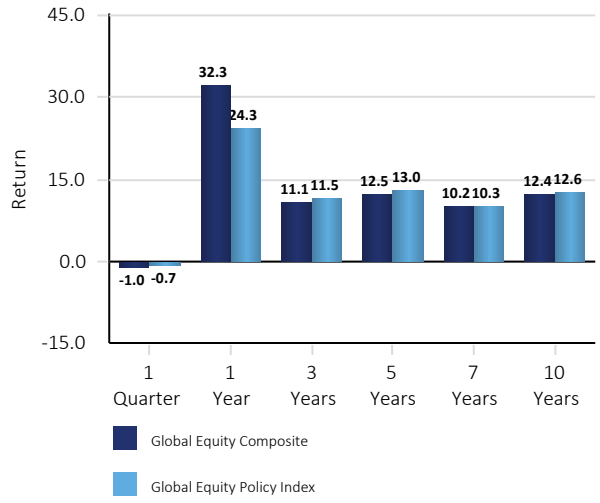


Performance Summary

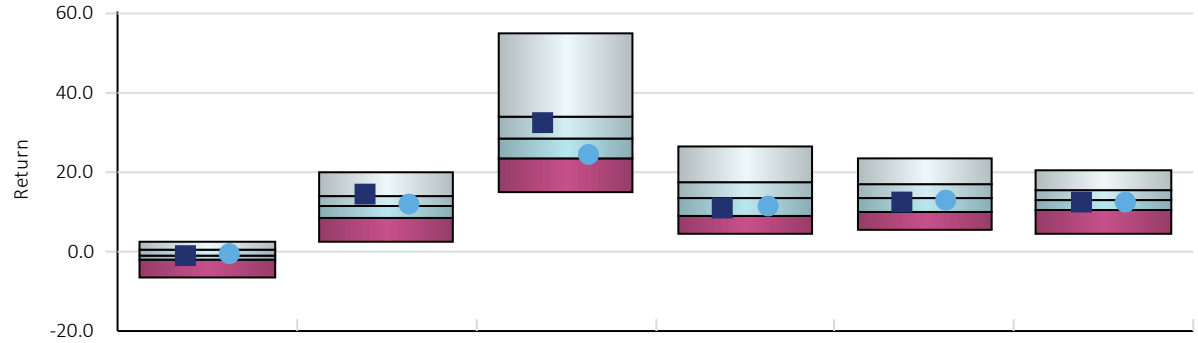
Global Equity Composite

Periods Ended September 30, 2021

Comparative Performance

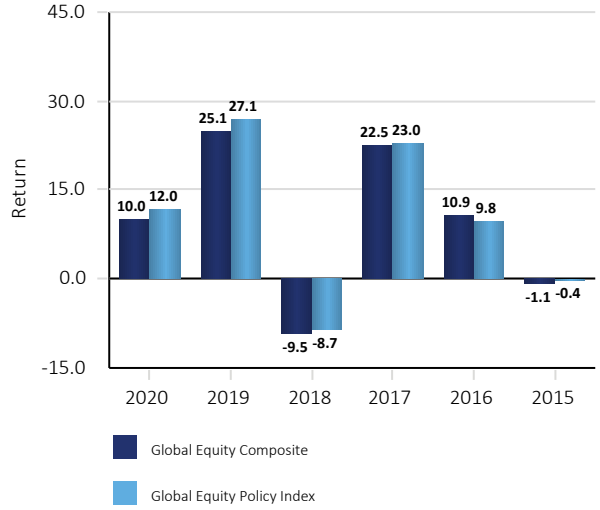


Peer Group Analysis: IM Global Equity (SA+CF+MF)

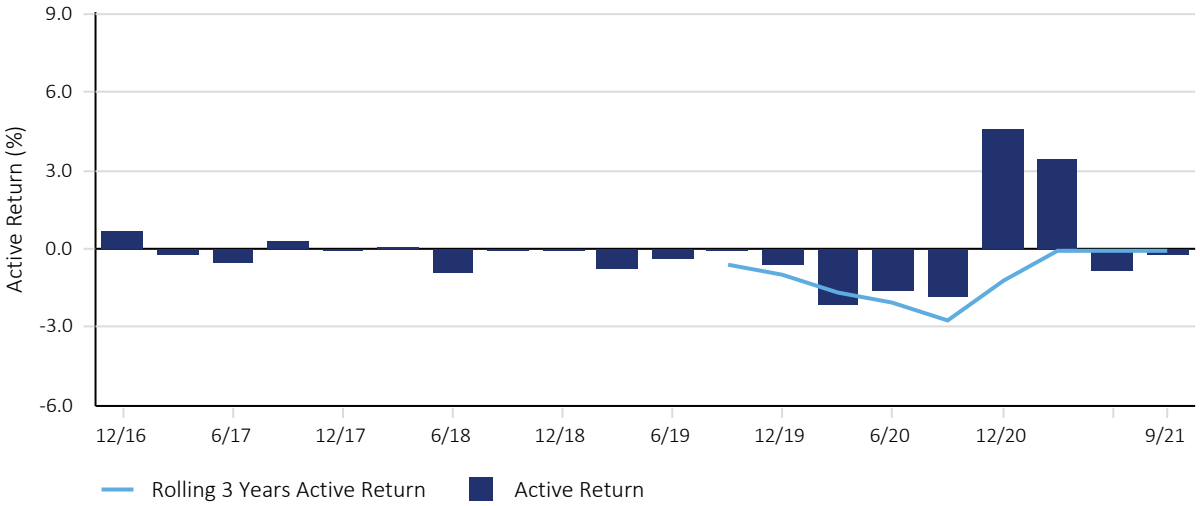


	Quarter	Year To Date	1 Year	3 Years	5 Years	10 Years
Fund	-0.95 (53)	14.48 (22)	32.29 (30)	11.08 (64)	12.54 (60)	12.39 (61)
Benchmark	-0.71 (50)	11.94 (44)	24.27 (73)	11.51 (62)	12.95 (56)	12.61 (56)
Median	-0.77	11.35	28.34	13.30	13.55	13.05

Comparative Performance



Rolling 3 Years Performance

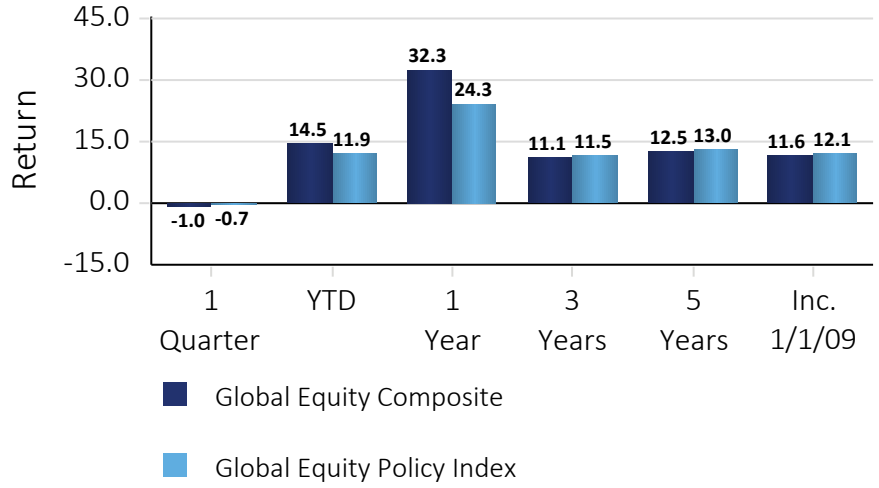


Manager Summary

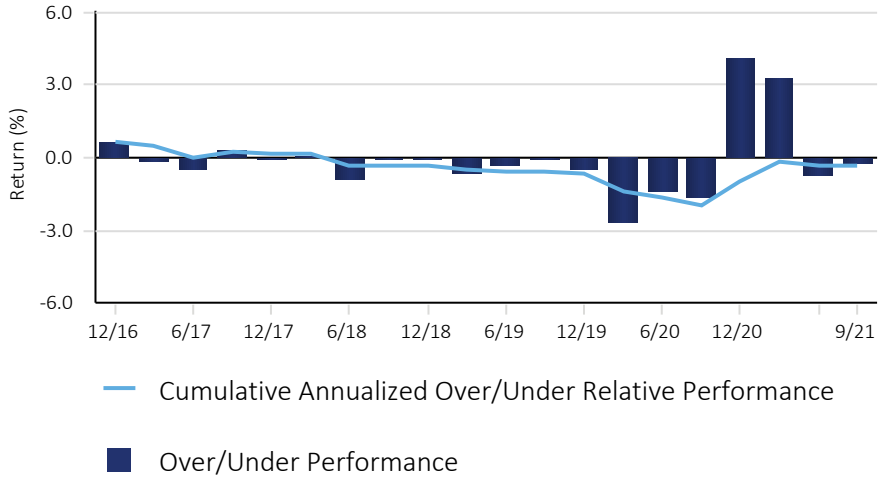
Global Equity Composite vs IM Global Equity (SA+CF+MF)

Periods Ended September 30, 2021

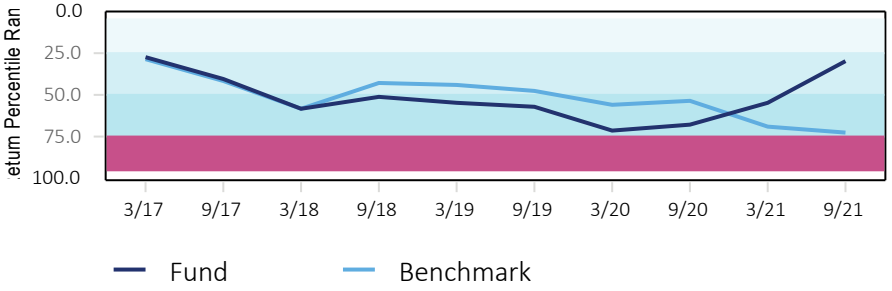
Comparative Performance



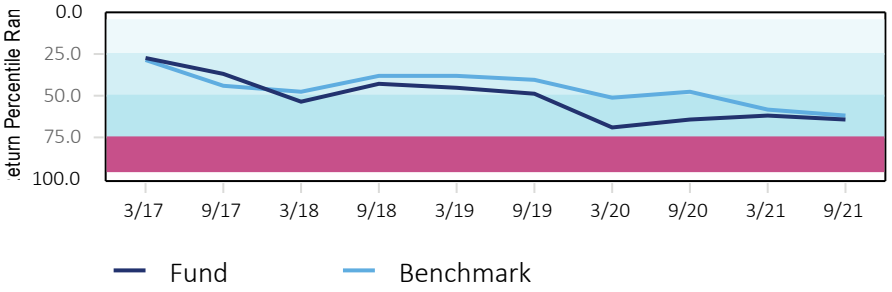
Relative Performance



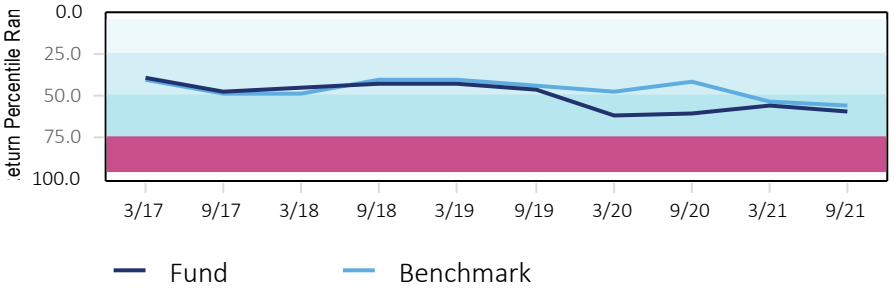
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking

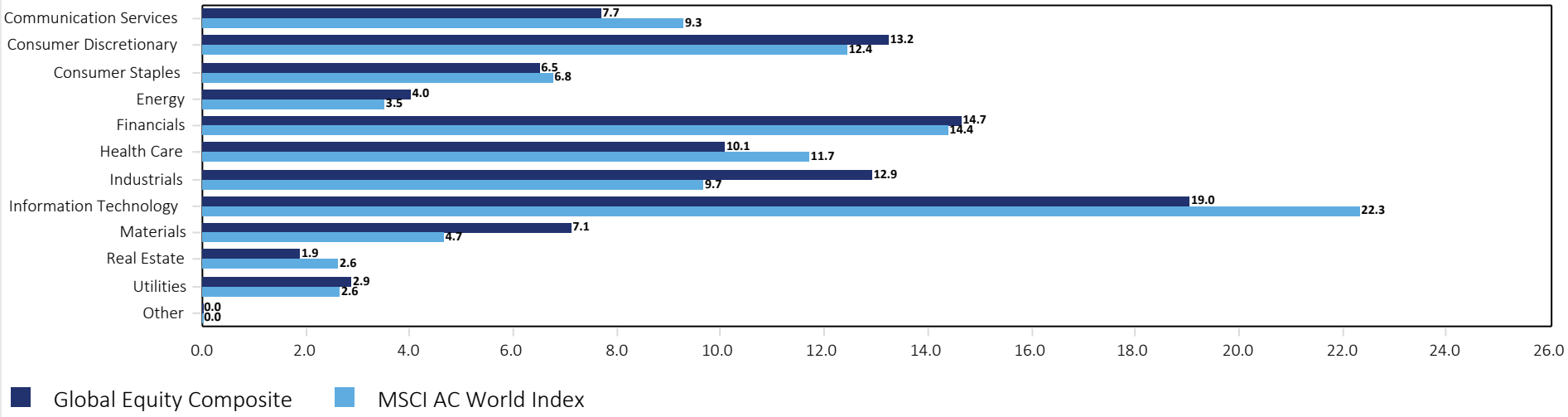


Portfolio Characteristics

Global Equity Composite

Periods Ended As of September 30, 2021

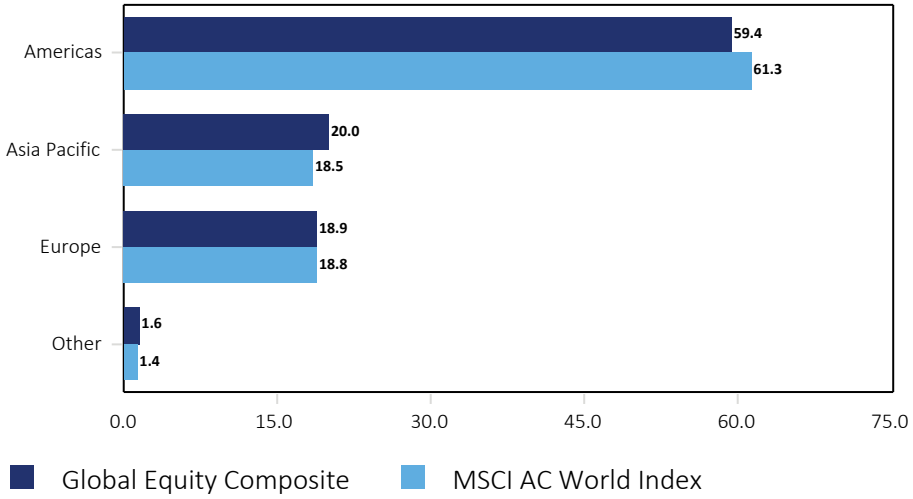
Sector Weights (%)



Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap $	245,302,338,220	348,943,284,815
Median Mkt. Cap $	992,116,962	13,589,282,145
Price/Earnings ratio	16.2	19.8
Price/Book ratio	3.0	3.7
5 Yr. EPS Growth Rate (%)	14.7	17.7
Current Yield (%)	2.2	1.9
Beta (5 Years, Monthly)	0.99	1.00
Number of Stocks	16,048	2,979

Region Allocation

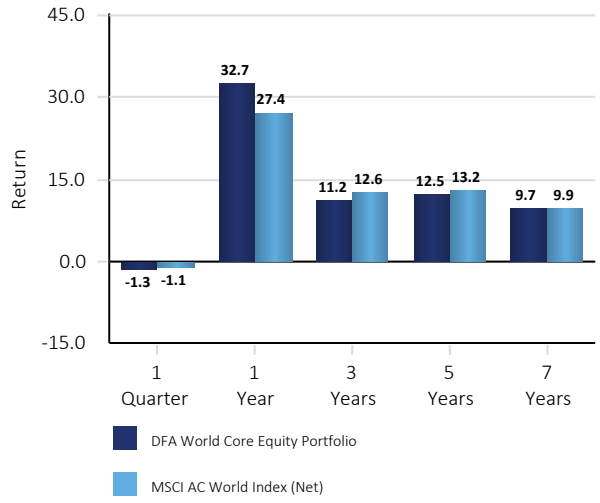


Performance Summary

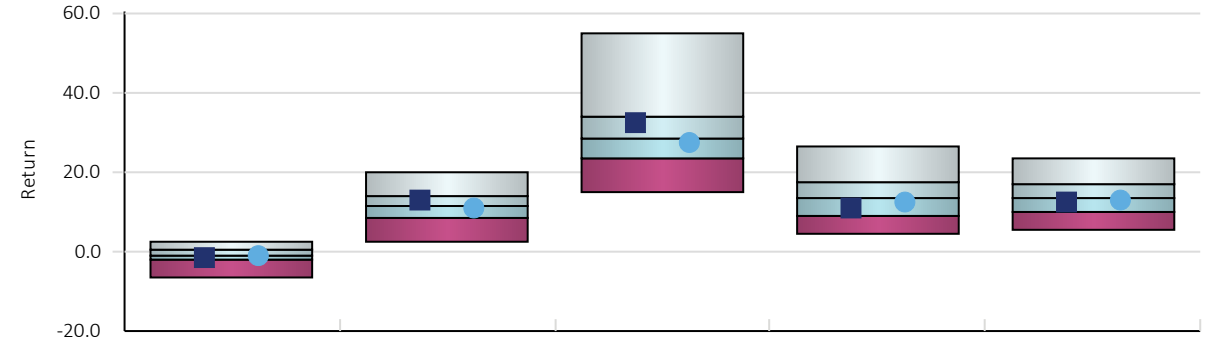
DFA World Core Equity Portfolio

Periods Ended September 30, 2021

Comparative Performance

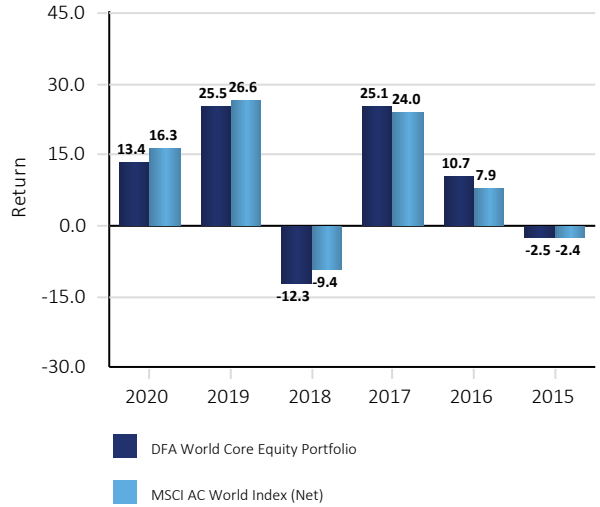


Peer Group Analysis: IM Global Equity (SA+CF+MF)

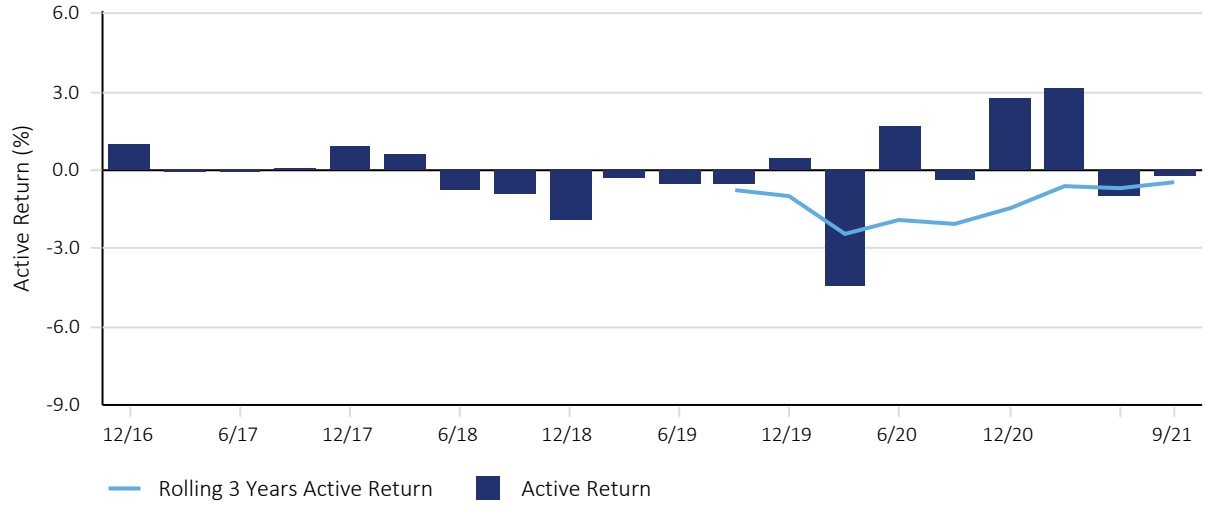


	Quarter	Year To Date	1 Year	3 Years	5 Years
Fund	-1.29 (59)	13.07 (33)	32.73 (28)	11.16 (64)	12.53 (60)
Benchmark	-1.05 (54)	11.12 (53)	27.44 (56)	12.58 (55)	13.20 (54)
Median	-0.77	11.35	28.34	13.30	13.55

Comparative Performance



Rolling 3 Years Performance

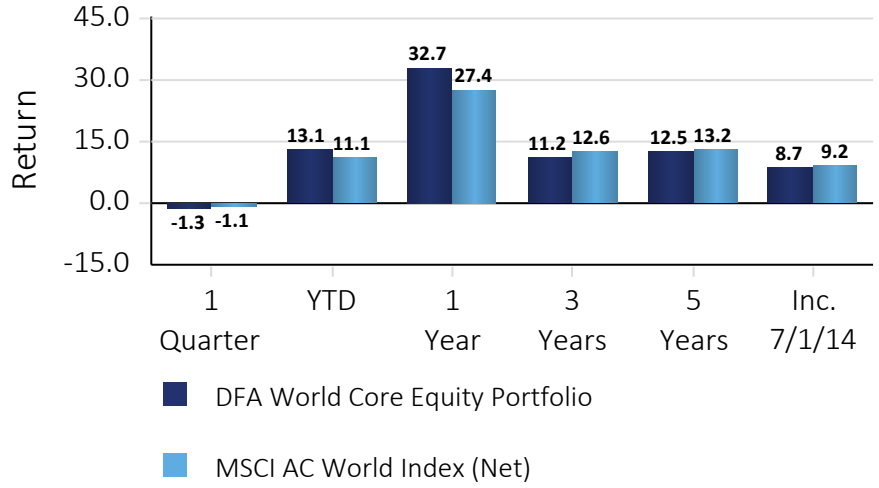


Manager Summary

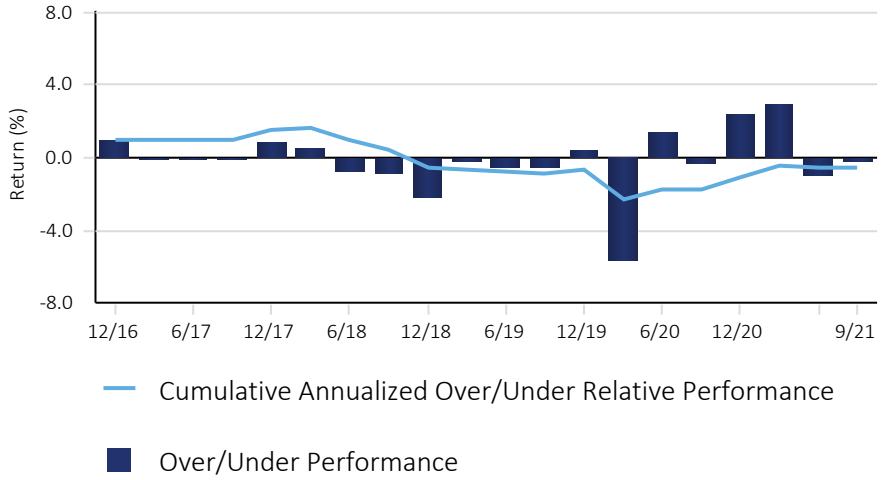
DFA World Core Equity Portfolio vs IM Global Equity (SA+CF+MF)

Periods Ended September 30, 2021

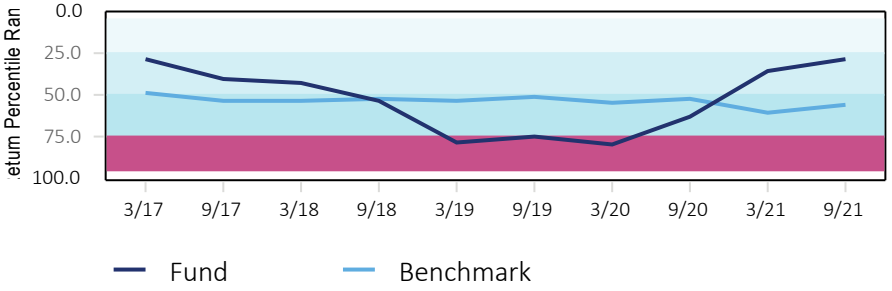
Comparative Performance



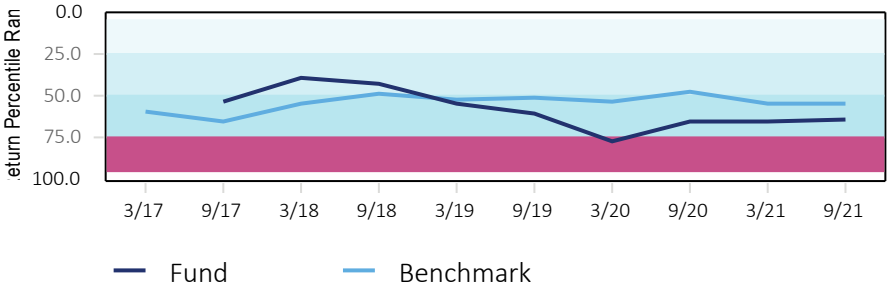
Relative Performance



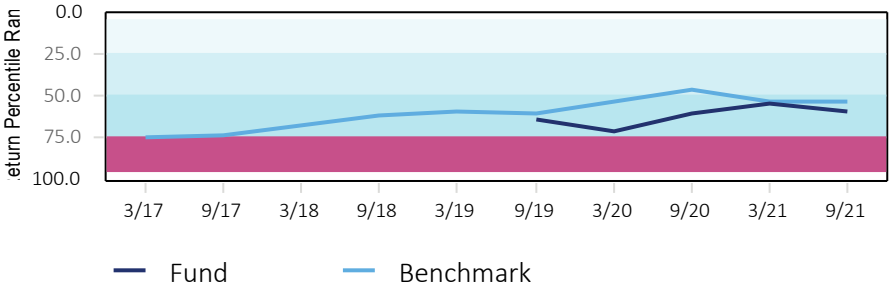
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking

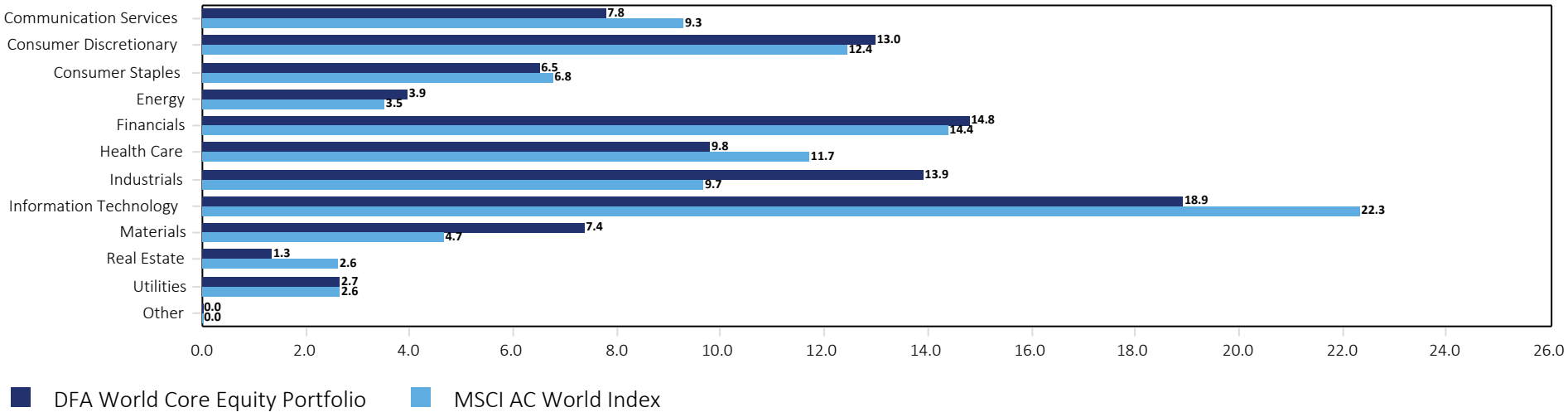


Portfolio Characteristics

DFA World Core Equity Portfolio

Periods Ended As of September 30, 2021

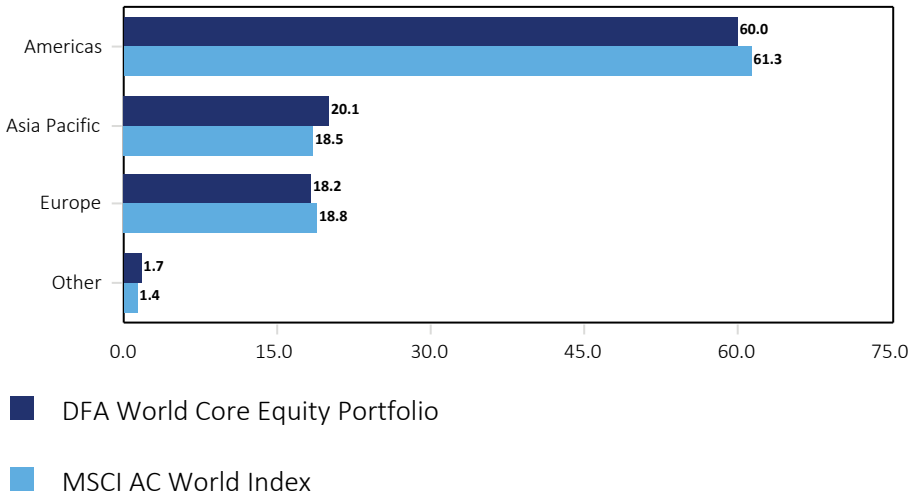
Sector Weights (%)



Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap $	241,580,935,145	348,943,284,815
Median Mkt. Cap $	897,790,266	13,589,282,145
Price/Earnings ratio	16.7	19.8
Price/Book ratio	3.1	3.7
5 Yr. EPS Growth Rate (%)	17.3	17.7
Current Yield (%)	2.0	1.9
Beta (5 Years, Monthly)	1.09	1.00
Number of Stocks	14,164	2,979

Region Allocation

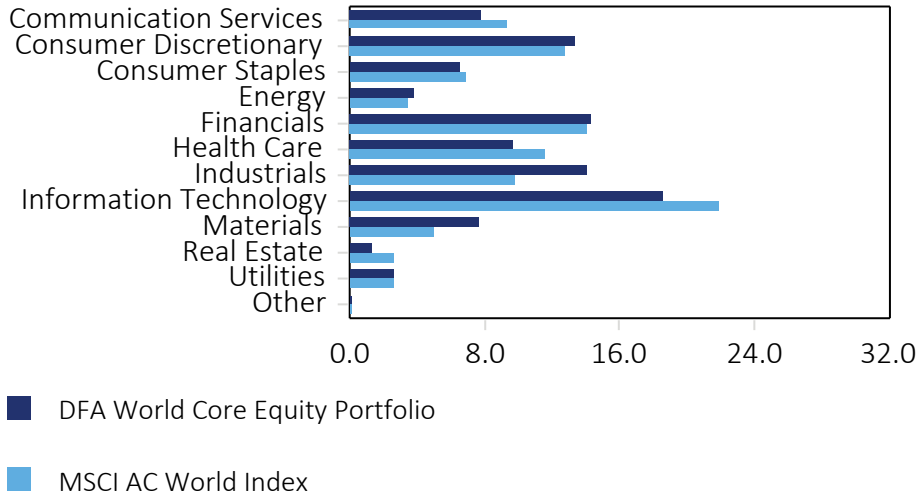


Buy and Hold Currency Attribution Graph

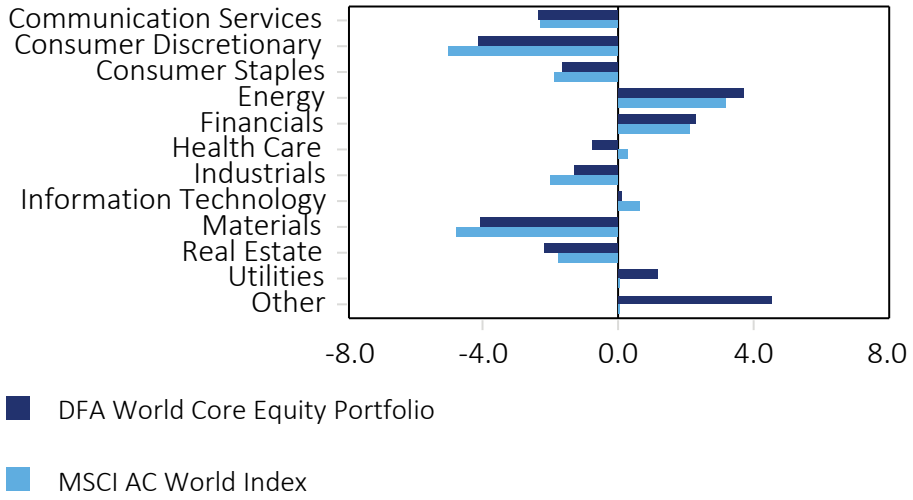
DFA World Core Equity Portfolio

Periods Ended 1 Quarter Ending September 30, 2021

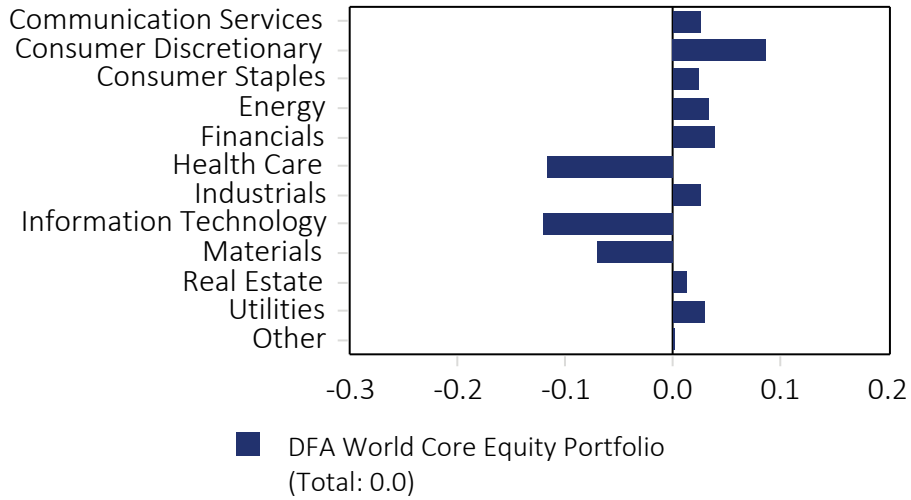
Sector Allocation



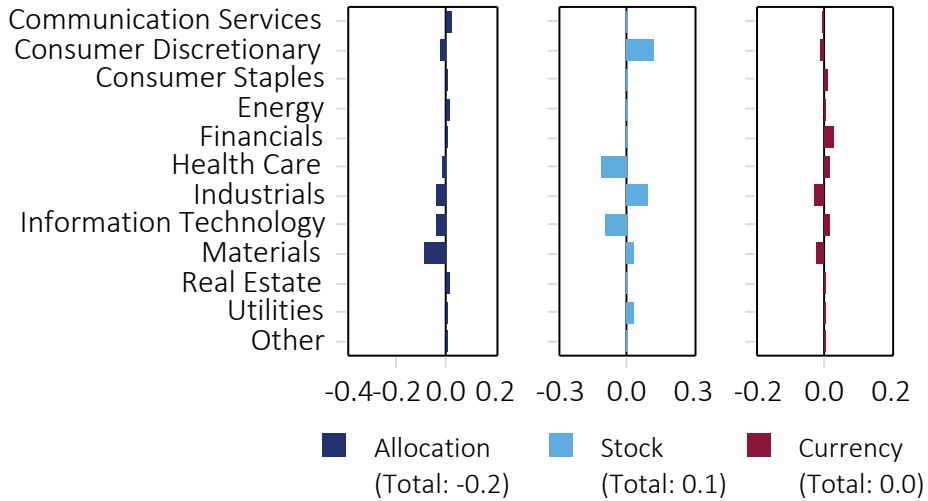
Sector Performance



Sector Total Attribution



Sector Performance Attribution

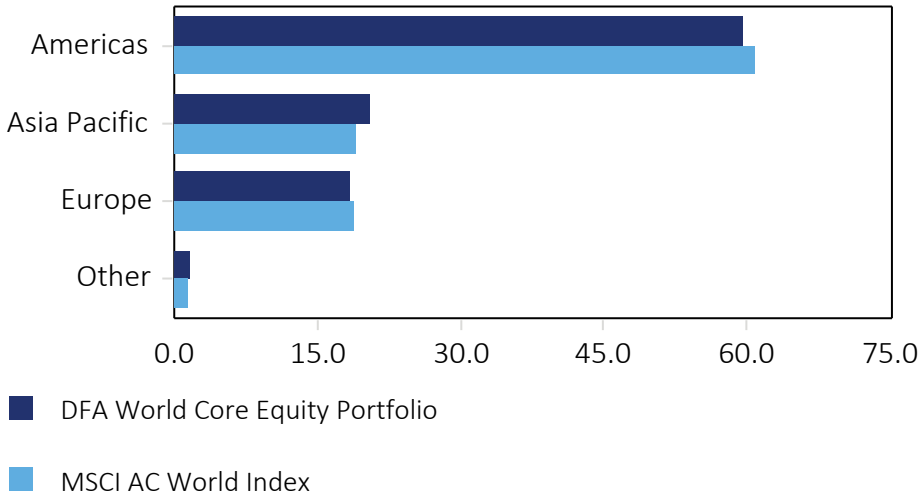


Buy and Hold Currency Attribution Graph

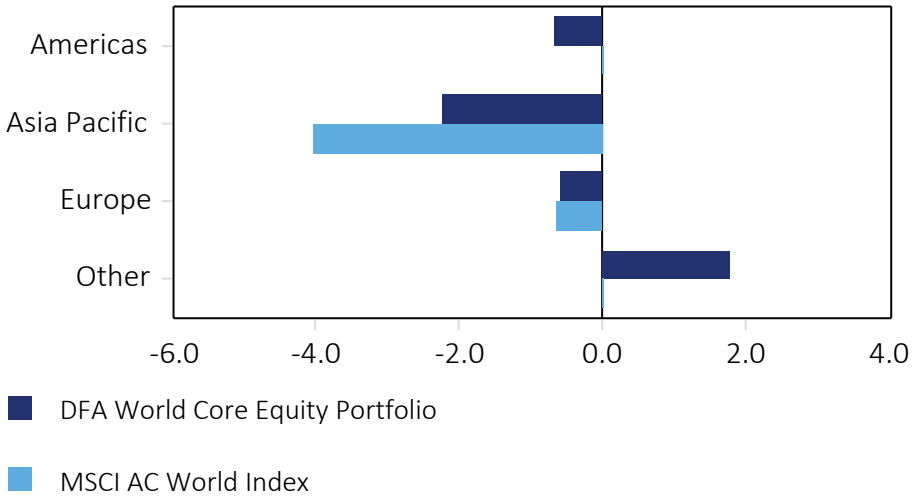
DFA World Core Equity Portfolio

Periods Ended 1 Quarter Ending September 30, 2021

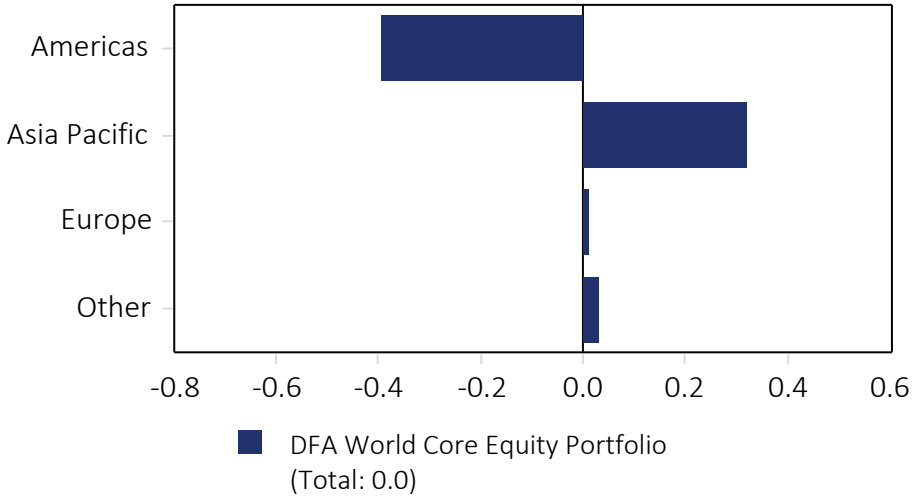
Region Allocation



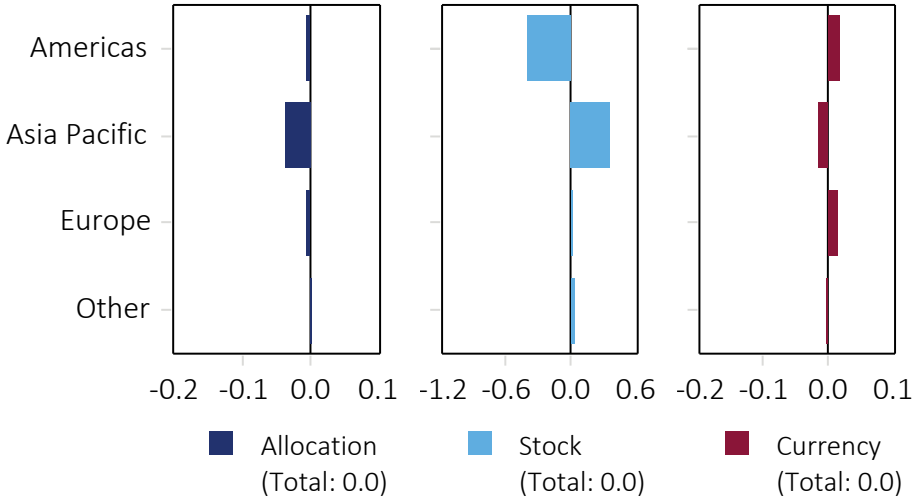
Region Performance



Region Total Attribution



Region Performance Attribution

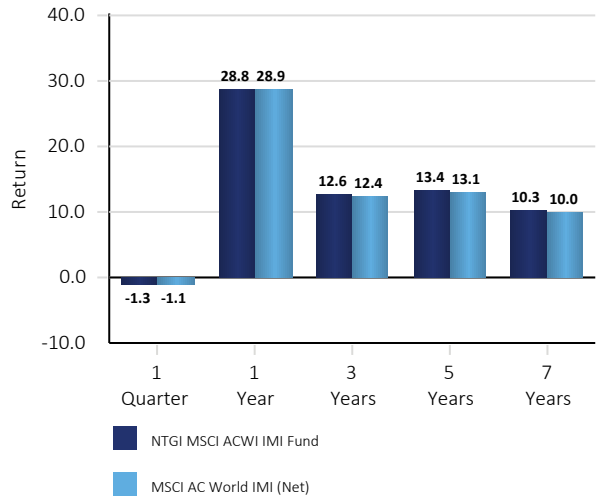


Performance Summary

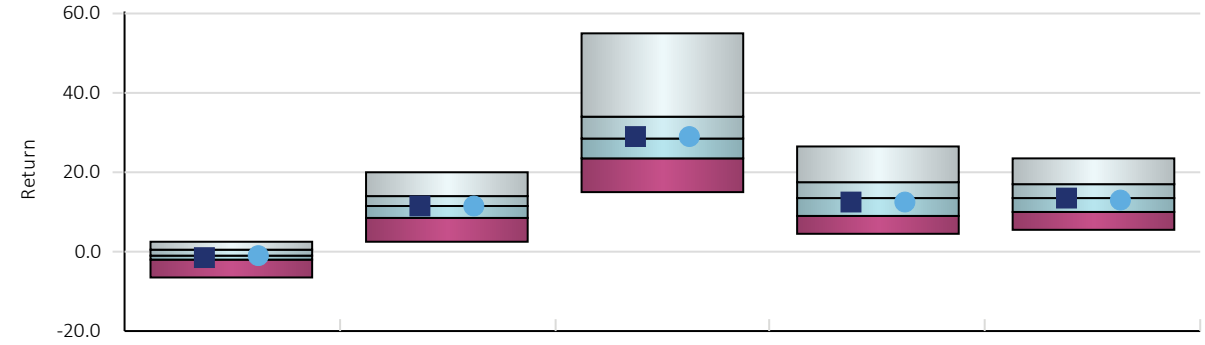
NTGI MSCI ACWI IMI Fund

Periods Ended September 30, 2021

Comparative Performance

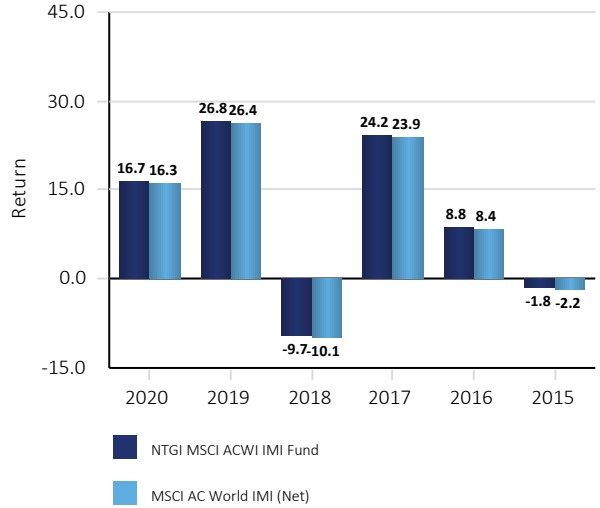


Peer Group Analysis: IM Global Equity (SA+CF+MF)

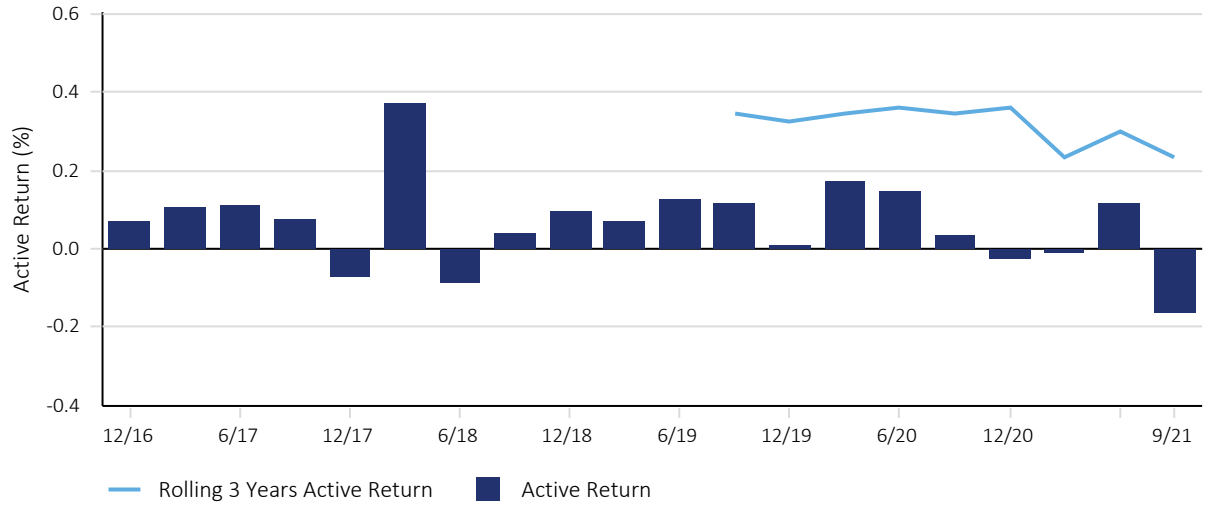


	Quarter	Year To Date	1 Year	3 Years	5 Years
Fund	-1.28 (59)	11.35 (50)	28.81 (47)	12.65 (55)	13.36 (53)
Benchmark	-1.11 (56)	11.42 (50)	28.92 (46)	12.38 (57)	13.06 (54)
Median	-0.77	11.35	28.34	13.30	13.55

Comparative Performance



Rolling 3 Years Performance

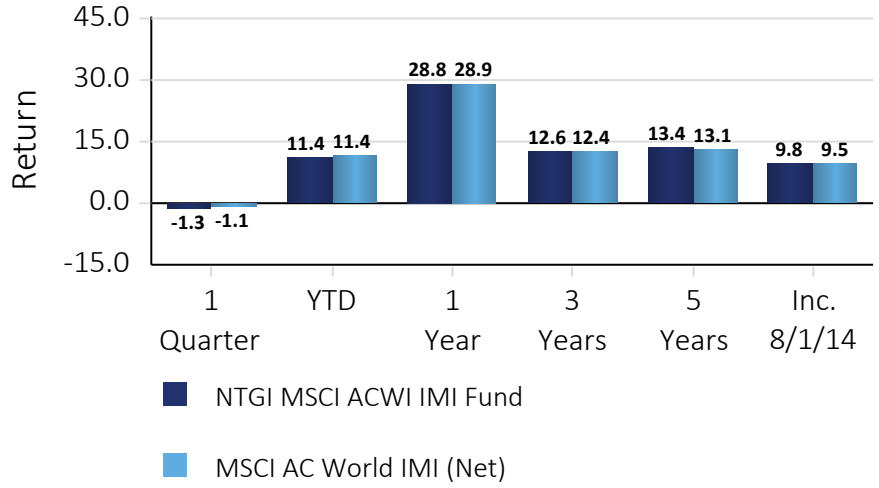


Manager Summary

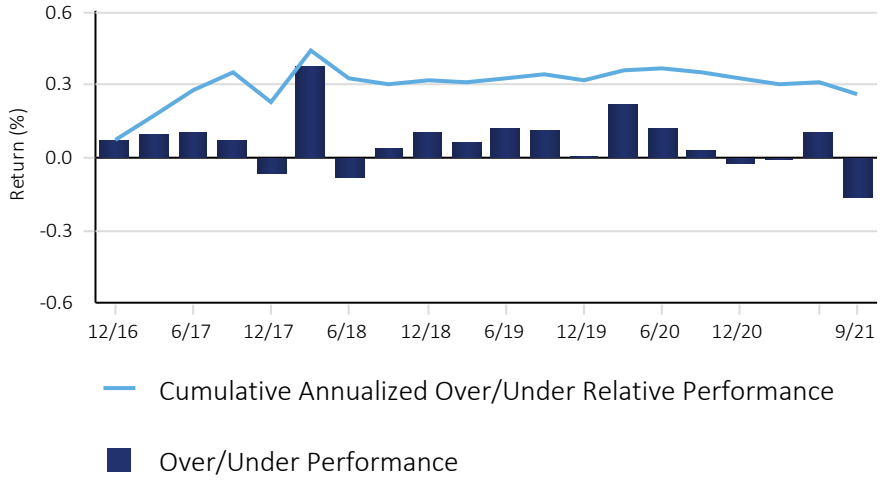
NTGI MSCI ACWI IMI Fund vs IM Global Equity (SA+CF+MF)

Periods Ended September 30, 2021

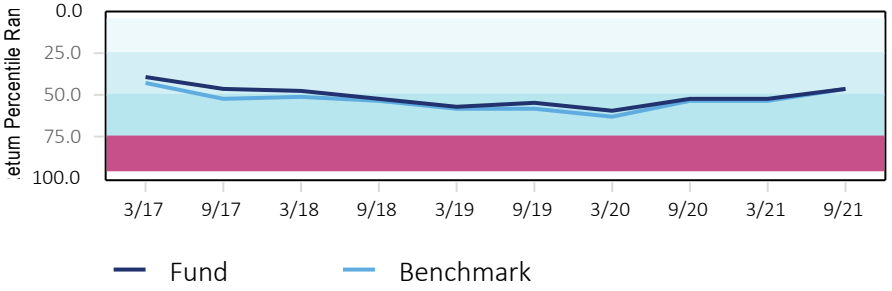
Comparative Performance



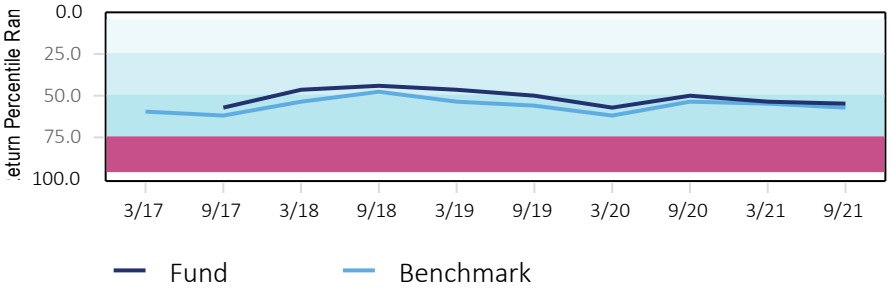
Relative Performance



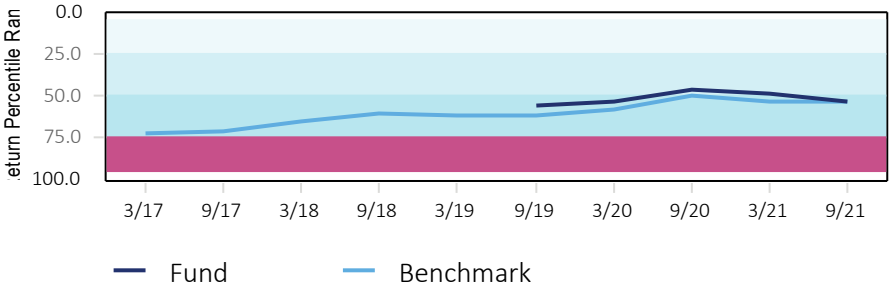
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking

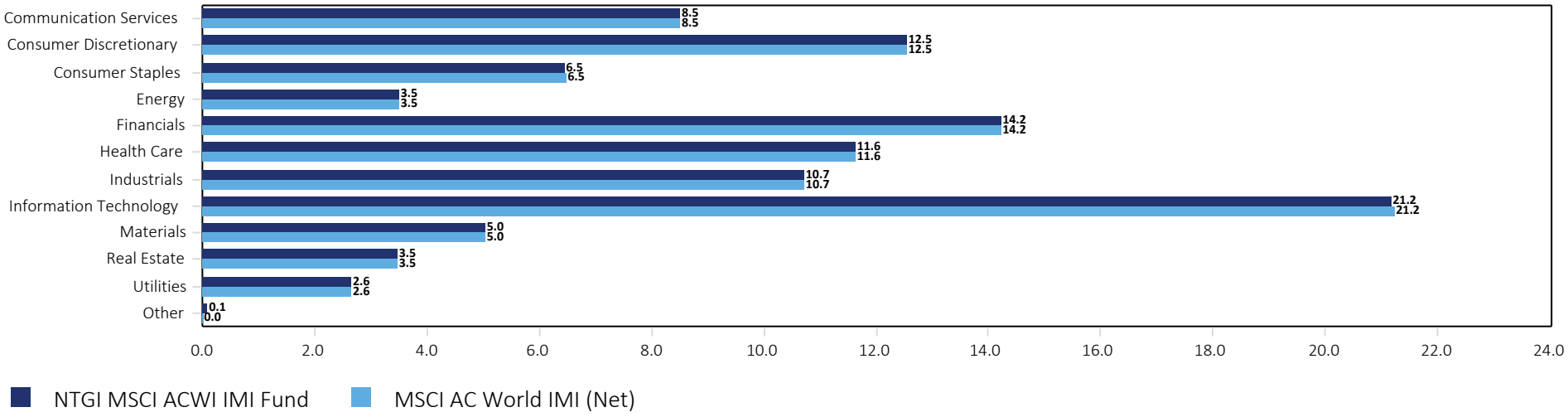


Portfolio Characteristics

NTGI MSCI ACWI IMI Fund

Periods Ended As of September 30, 2021

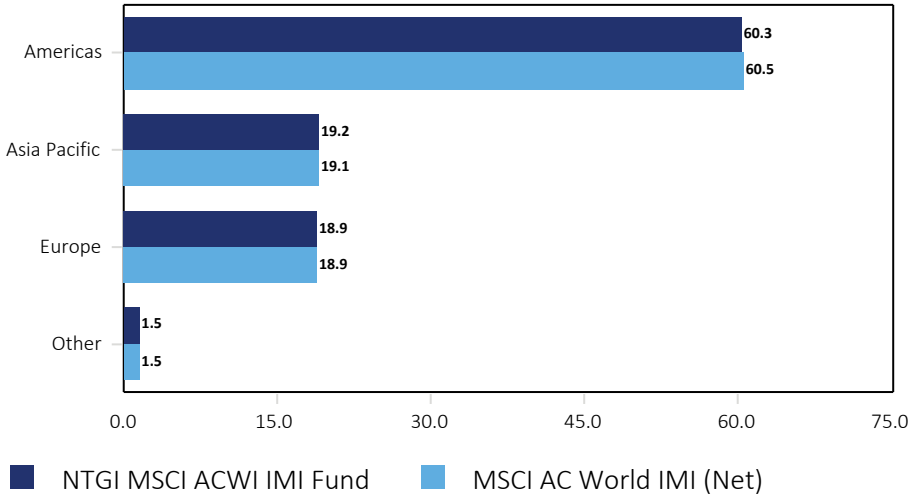
Sector Weights (%)



Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap $	304,819,201,346	305,396,200,225
Median Mkt. Cap $	2,258,245,065	2,231,332,437
Price/Earnings ratio	19.4	19.4
Price/Book ratio	3.5	3.5
5 Yr. EPS Growth Rate (%)	17.1	17.4
Current Yield (%)	1.8	1.8
Beta (5 Years, Monthly)	1.00	1.00
Number of Stocks	9,364	9,226

Region Allocation

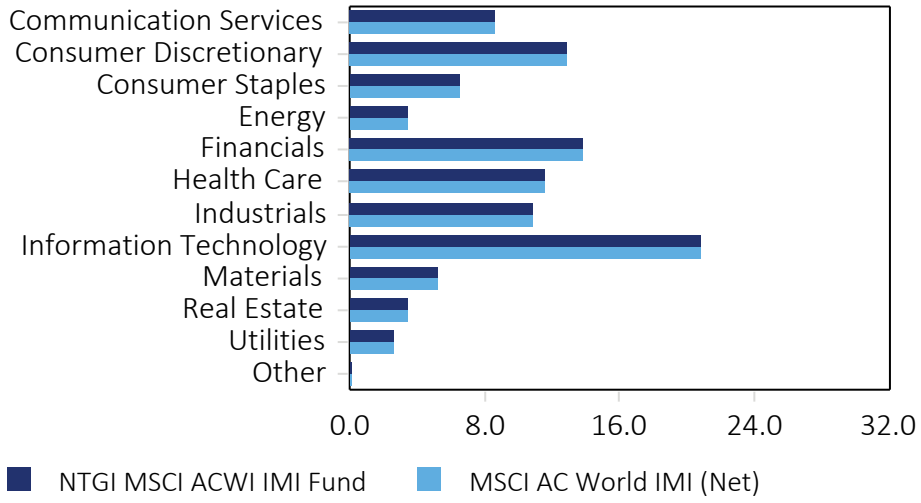


Buy and Hold Currency Attribution Graph

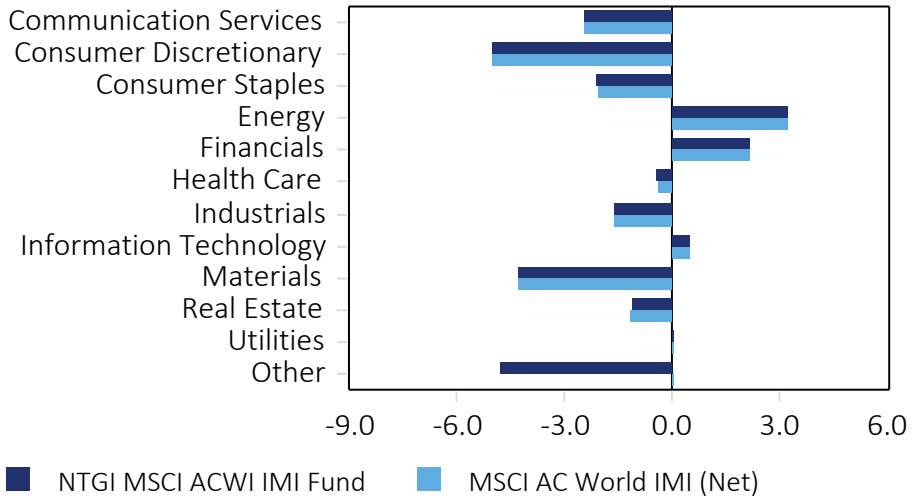
NTGI MSCI ACWI IMI Fund

Periods Ended 1 Quarter Ending September 30, 2021

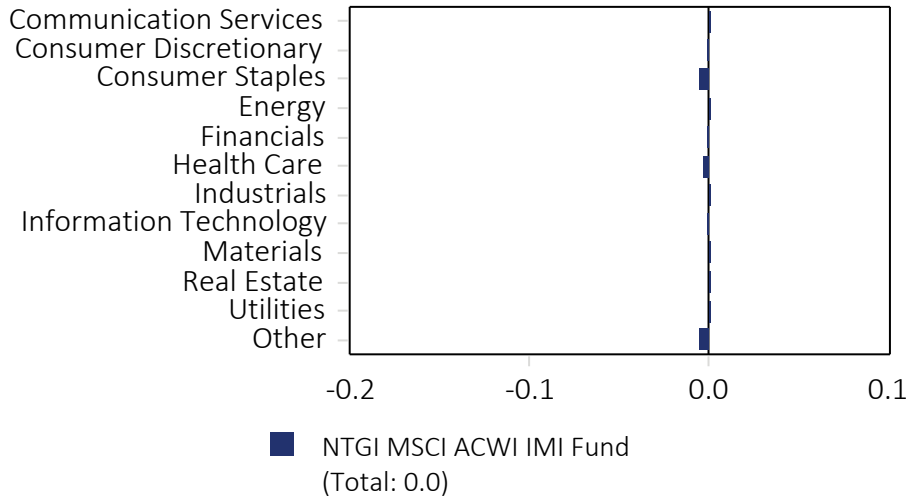
Sector Allocation



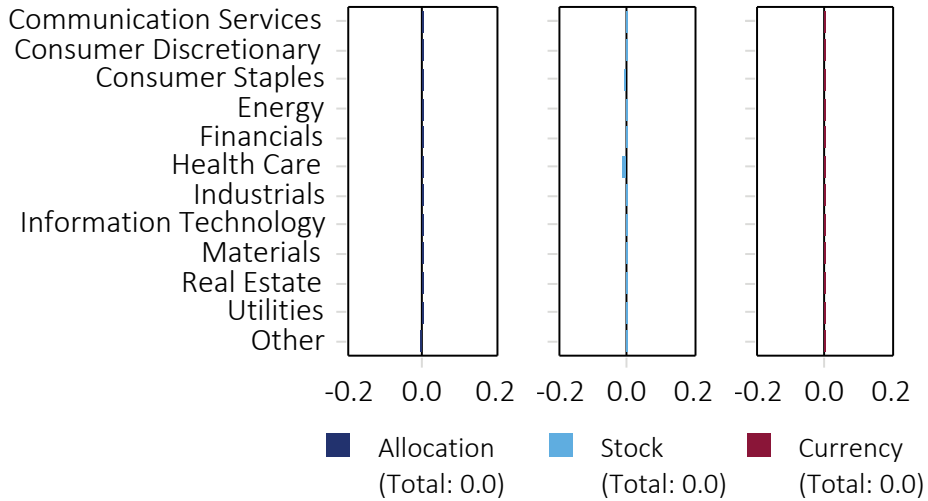
Sector Performance



Sector Total Attribution



Sector Performance Attribution

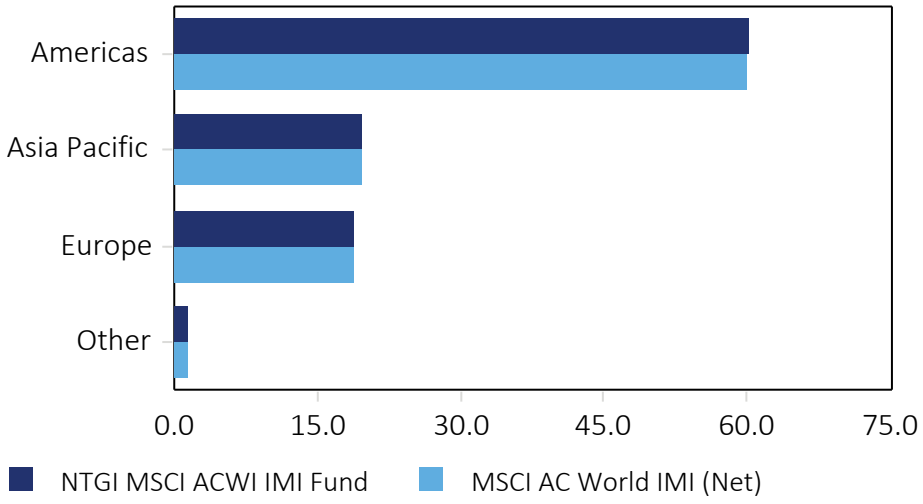


Buy and Hold Currency Attribution Graph

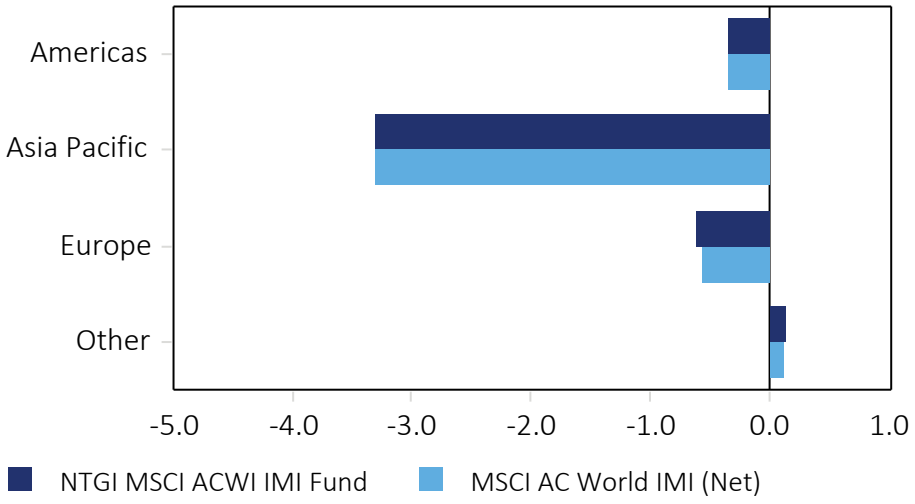
NTGI MSCI ACWI IMI Fund

Periods Ended 1 Quarter Ending September 30, 2021

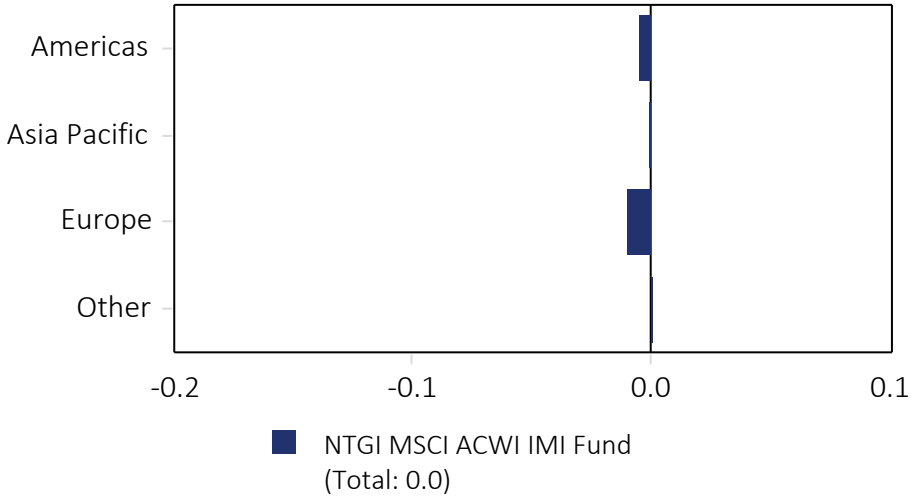
Region Allocation



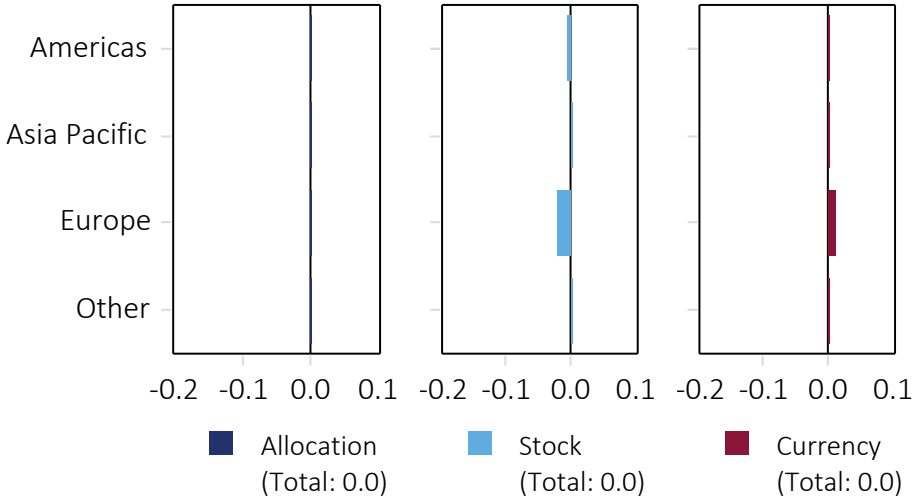
Region Performance



Region Total Attribution



Region Performance Attribution

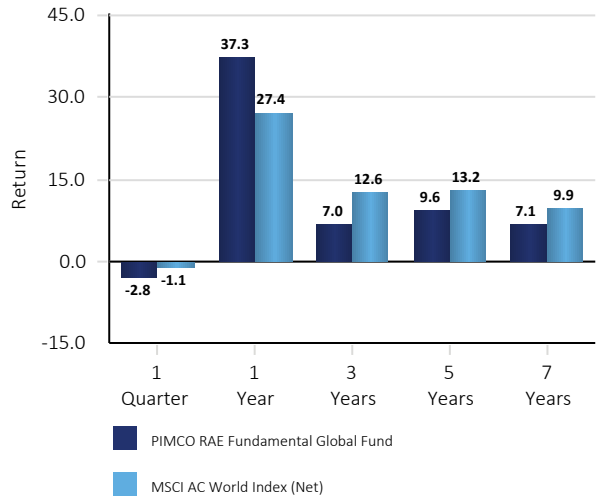


Performance Summary

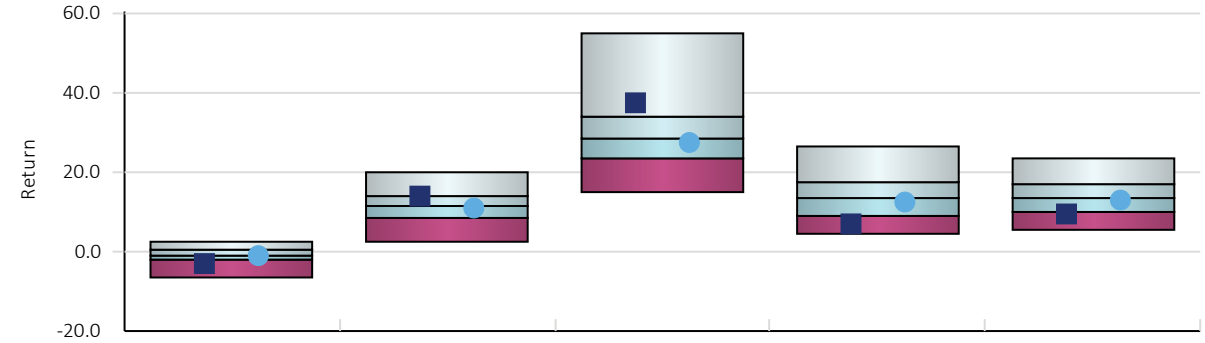
PIMCO RAE Fundamental Global Fund

Periods Ended September 30, 2021

Comparative Performance

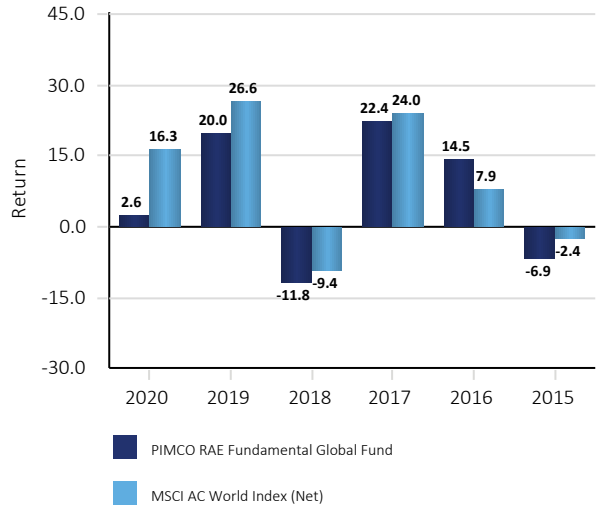


Peer Group Analysis: IM Global Equity (SA+CF+MF)

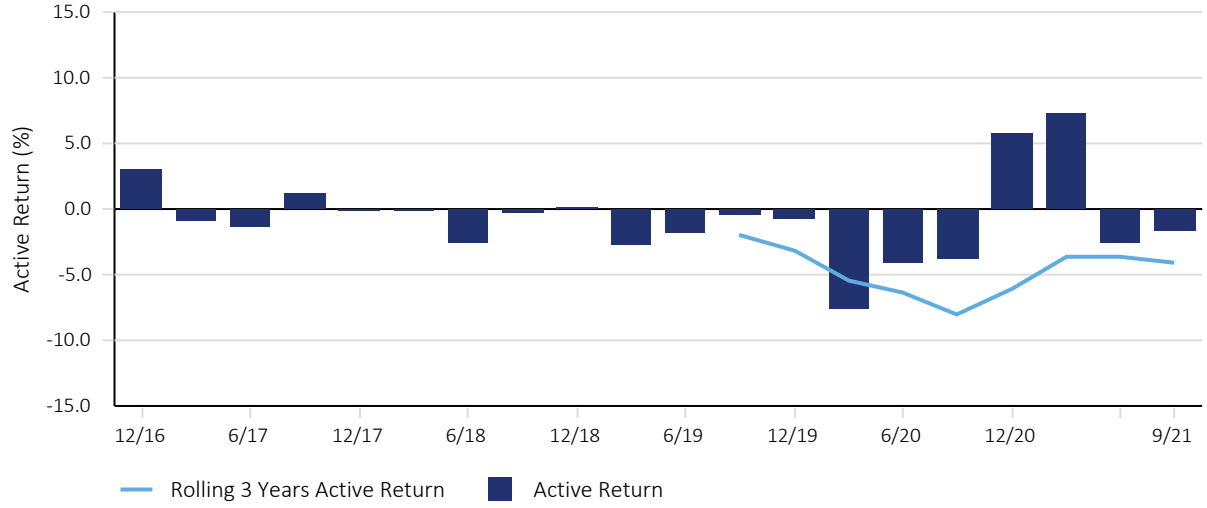


	Quarter	Year To Date	1 Year	3 Years	5 Years
Fund	-2.78 (84)	14.04 (24)	37.31 (18)	7.01 (87)	9.57 (78)
Benchmark	-1.05 (54)	11.12 (53)	27.44 (56)	12.58 (55)	13.20 (54)
Median	-0.77	11.35	28.34	13.30	13.55

Comparative Performance



Rolling 3 Years Performance

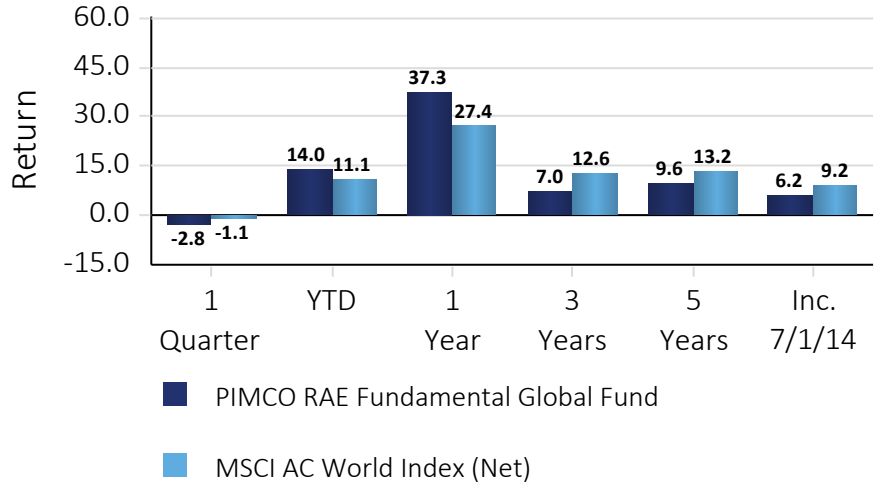


Manager Summary

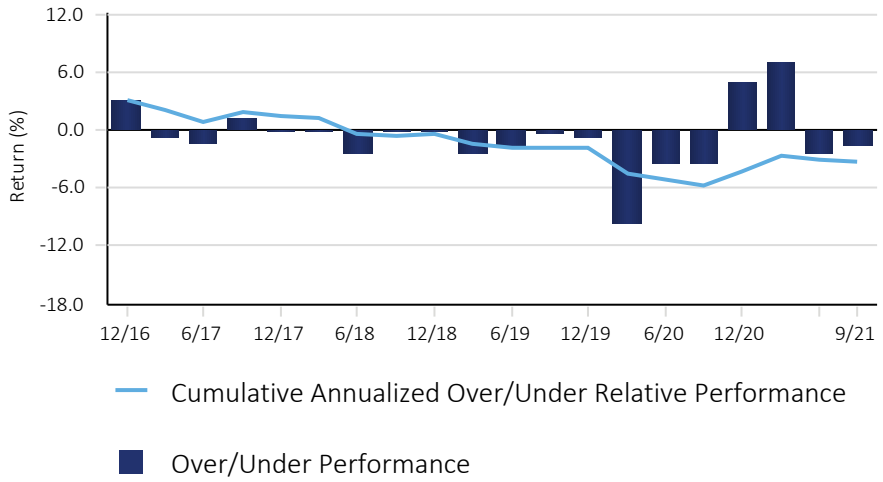
PIMCO RAE Fundamental Global Fund vs IM Global Equity (SA+CF+MF)

Periods Ended September 30, 2021

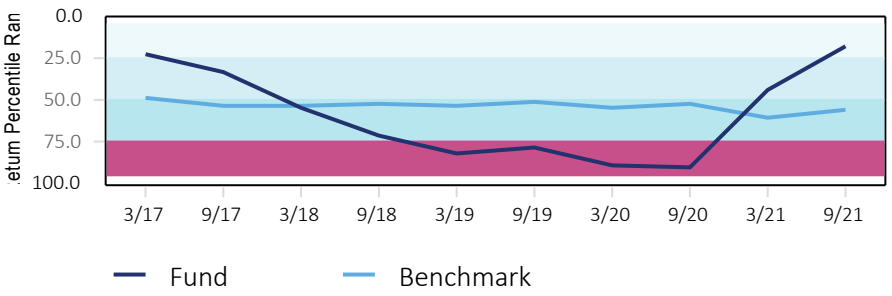
Comparative Performance



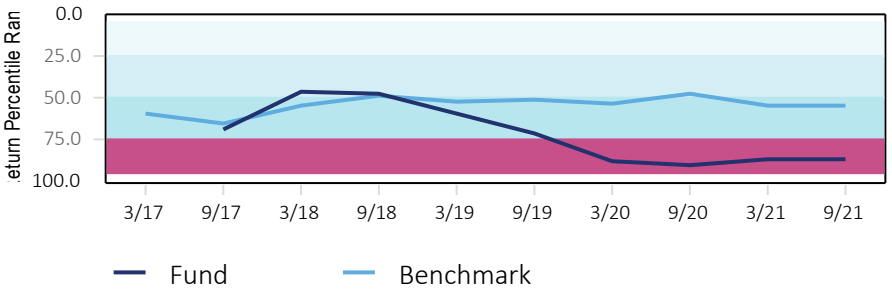
Relative Performance



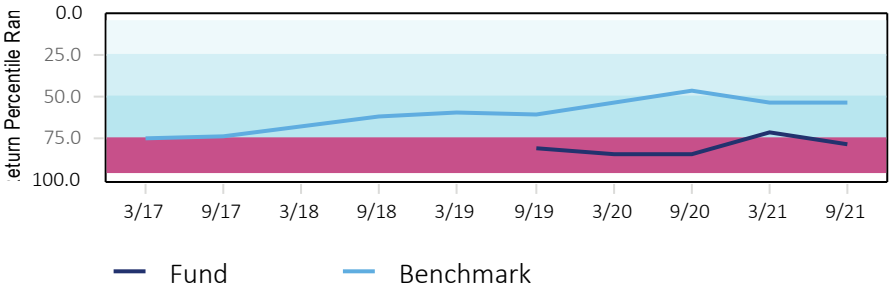
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking

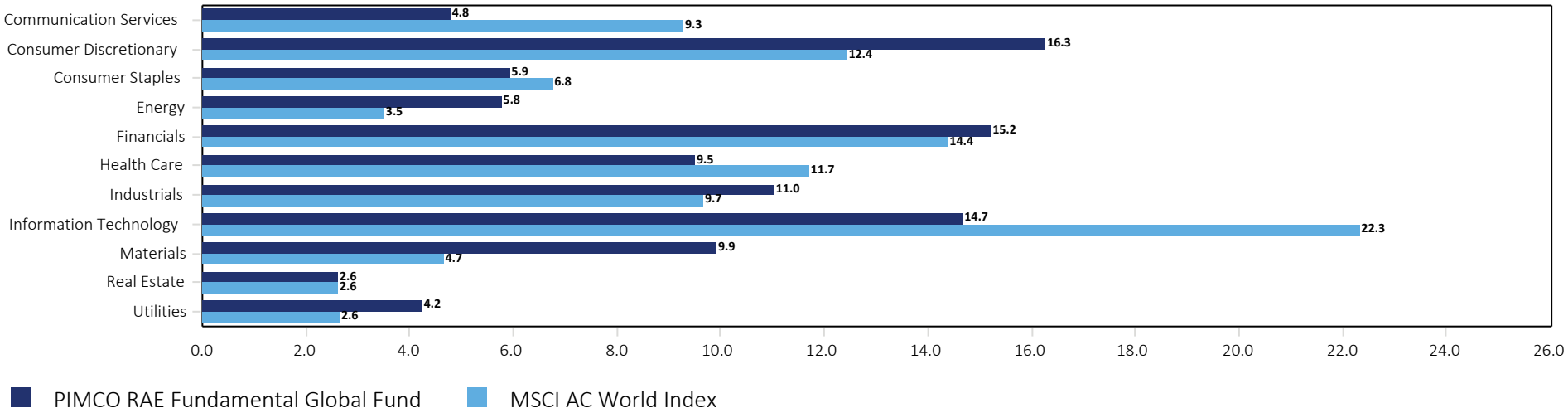


Portfolio Characteristics

PIMCO RAE Fundamental Global Fund

Periods Ended As of September 30, 2021

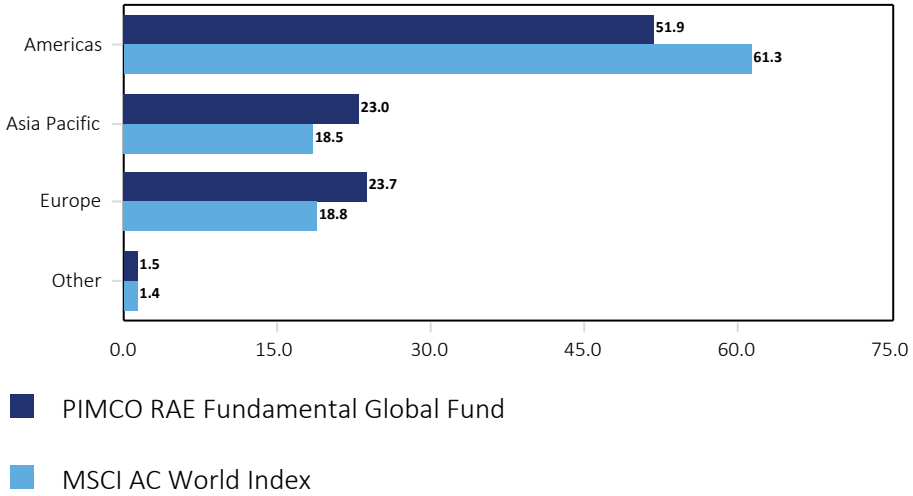
Sector Weights (%)



Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap $	102,554,141,269	348,943,284,815
Median Mkt. Cap $	8,443,919,845	13,589,282,145
Price/Earnings ratio	11.7	19.8
Price/Book ratio	2.1	3.7
5 Yr. EPS Growth Rate (%)	8.8	17.7
Current Yield (%)	2.8	1.9
Beta (5 Years, Monthly)	1.08	1.00
Number of Stocks	1,026	2,979

Region Allocation

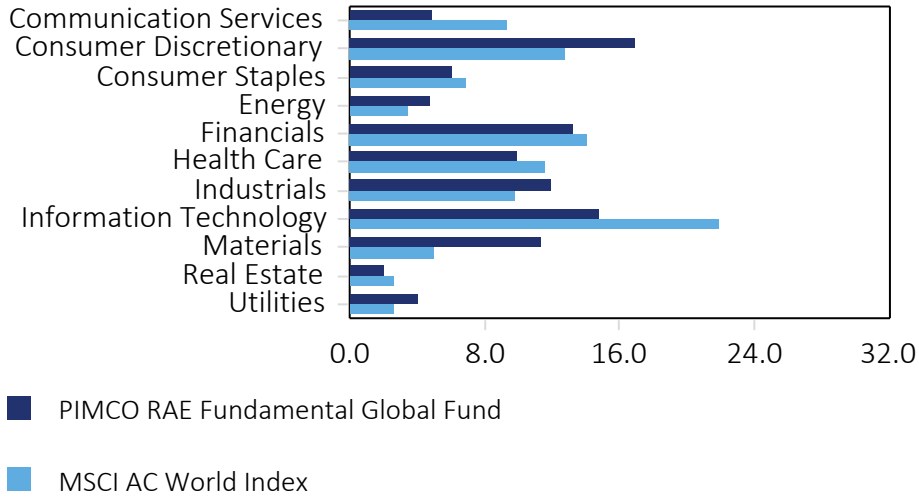


Buy and Hold Currency Attribution Graph

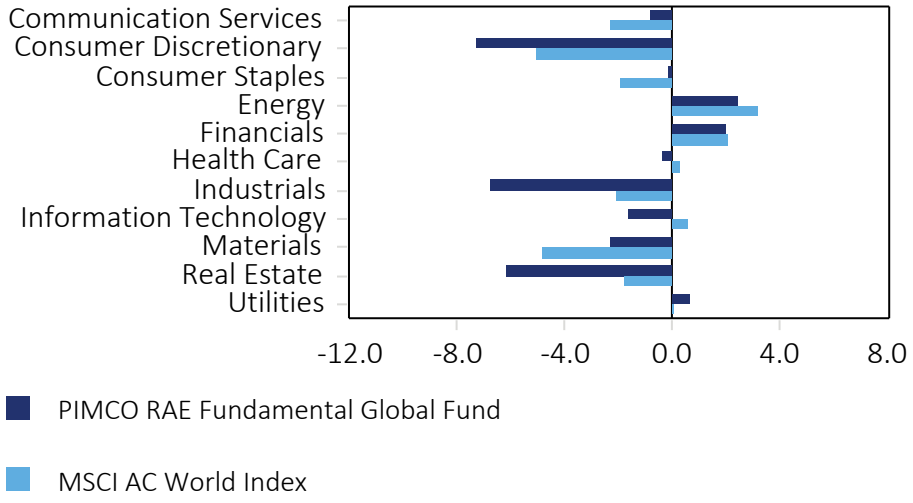
PIMCO RAE Fundamental Global Fund

Periods Ended 1 Quarter Ending September 30, 2021

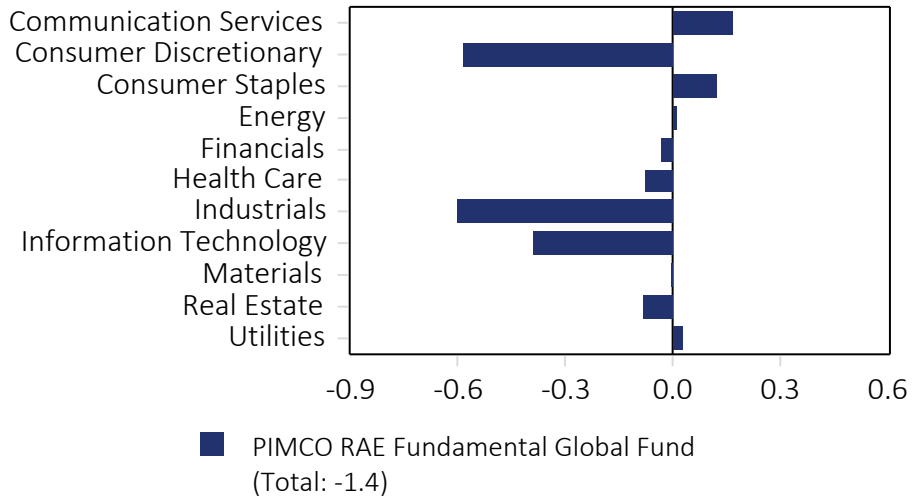
Sector Allocation



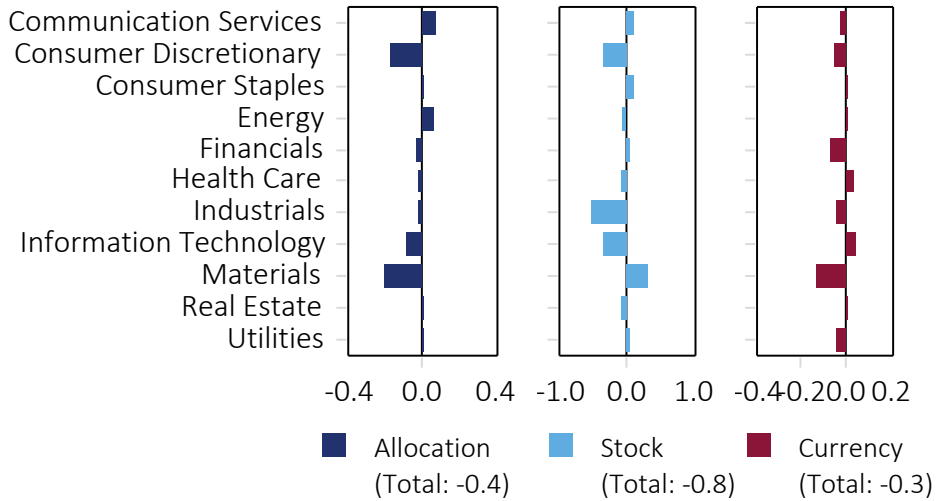
Sector Performance



Sector Total Attribution



Sector Performance Attribution

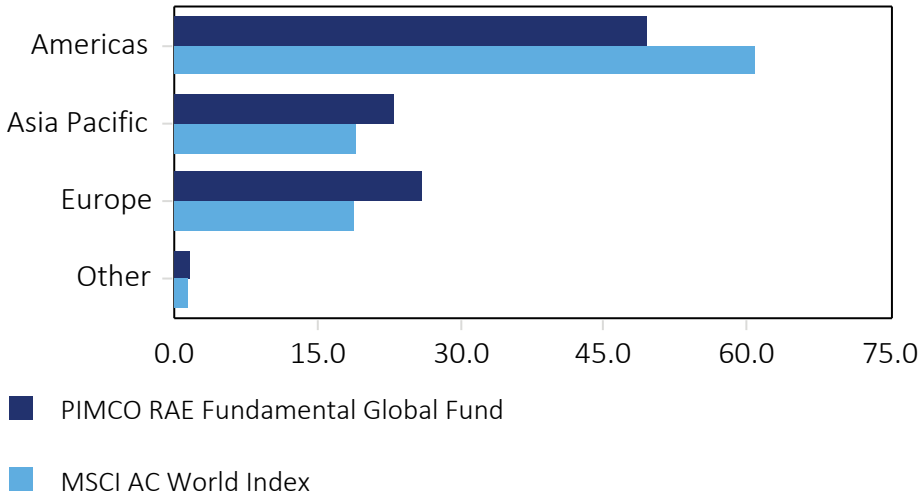


Buy and Hold Currency Attribution Graph

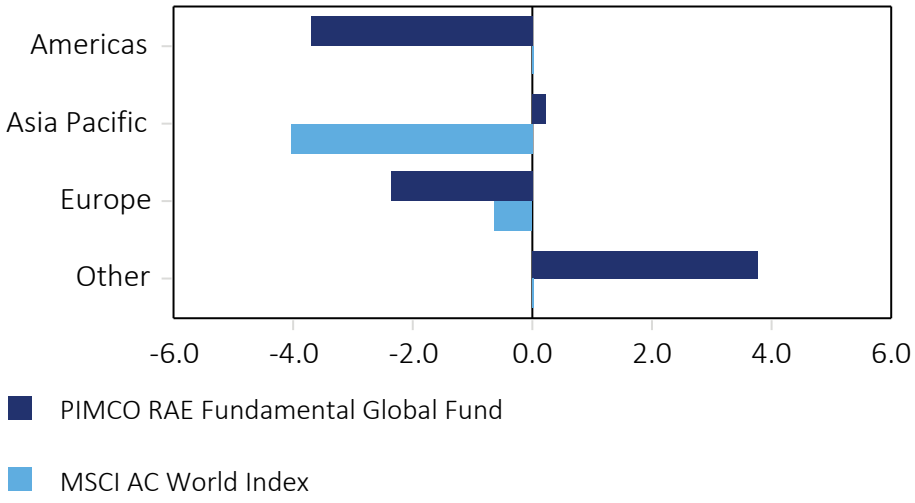
PIMCO RAE Fundamental Global Fund

Periods Ended 1 Quarter Ending September 30, 2021

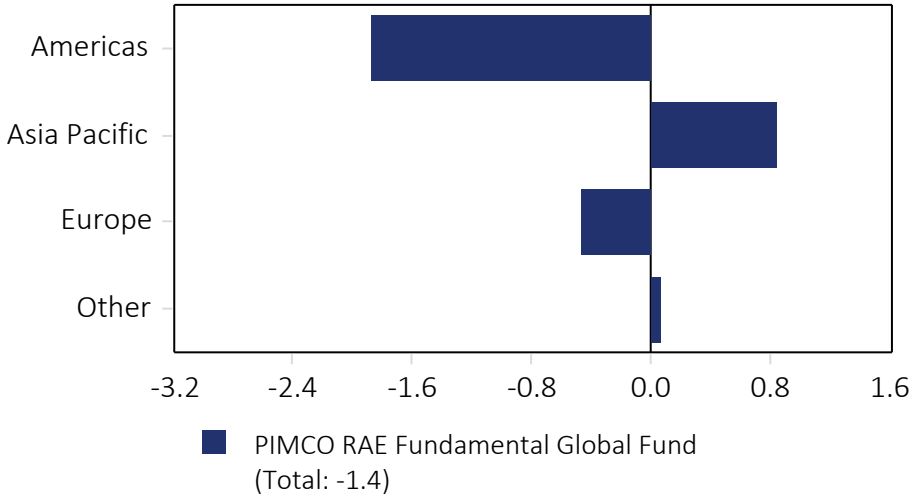
Region Allocation



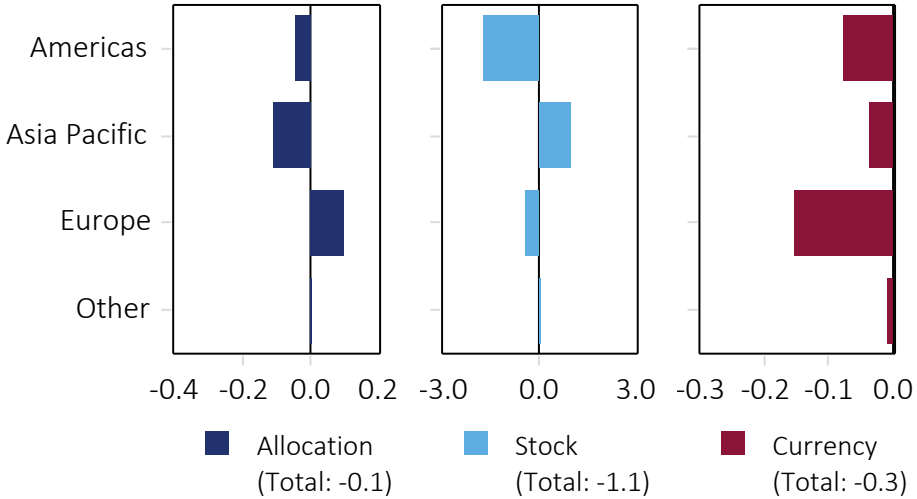
Region Performance



Region Total Attribution



Region Performance Attribution

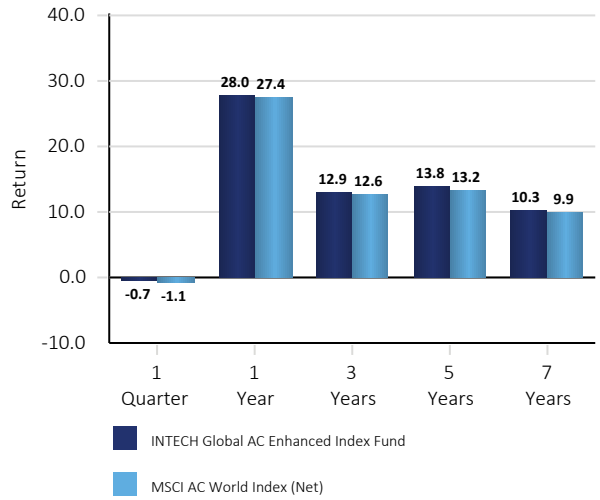


Performance Summary

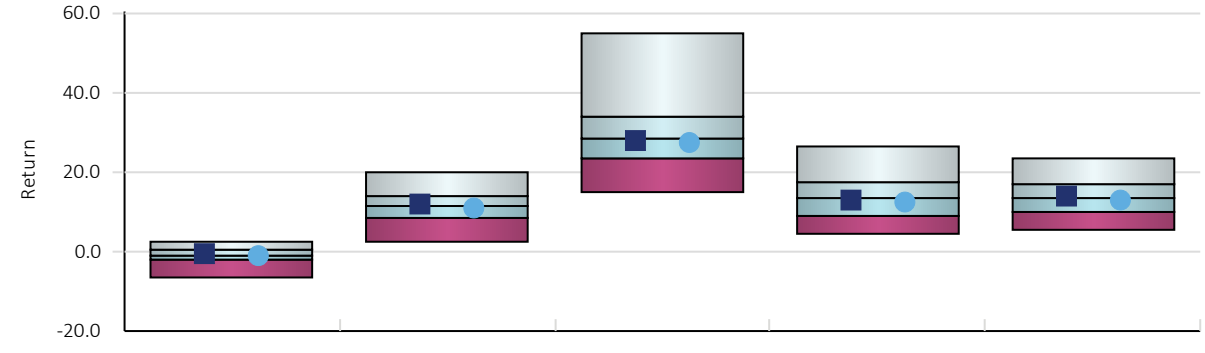
INTECH Global AC Enhanced Index Fund

Periods Ended September 30, 2021

Comparative Performance

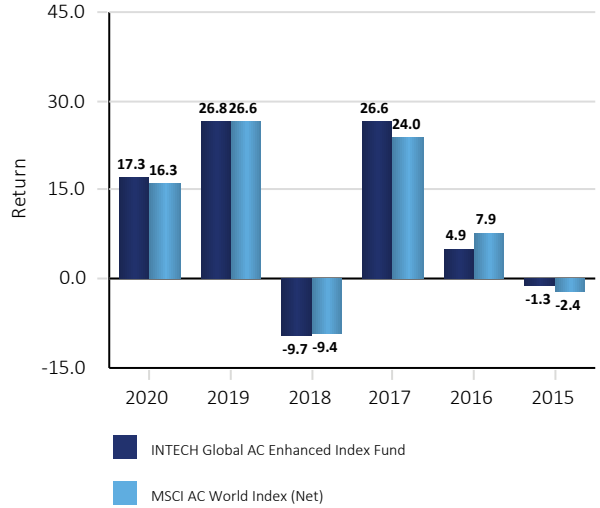


Peer Group Analysis: IM Global Equity (SA+CF+MF)

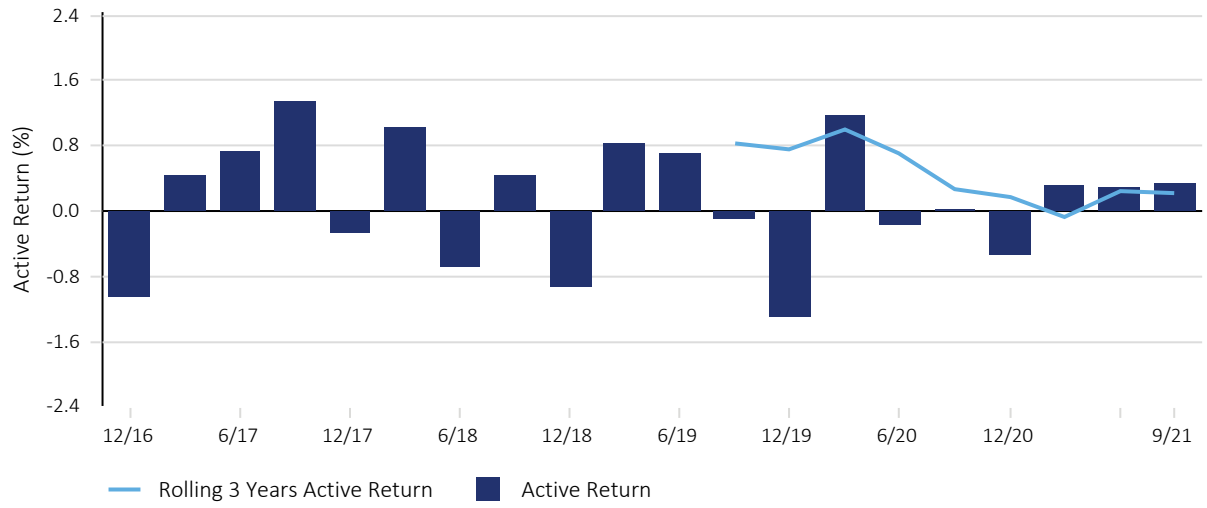


	Quarter	Year To Date	1 Year	3 Years	5 Years
Fund	-0.71 (50)	12.15 (43)	28.00 (53)	12.91 (54)	13.82 (48)
Benchmark	-1.05 (54)	11.12 (53)	27.44 (56)	12.58 (55)	13.20 (54)
Median	-0.77	11.35	28.34	13.30	13.55

Comparative Performance



Rolling 3 Years Performance

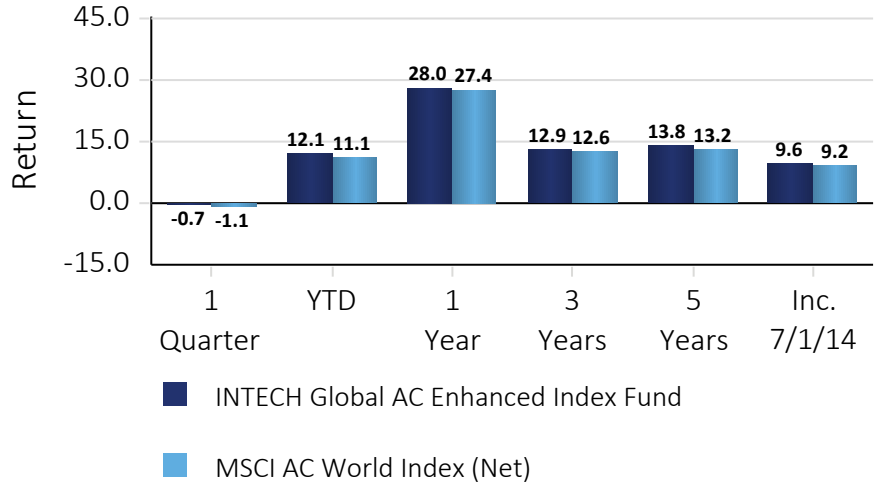


Manager Summary

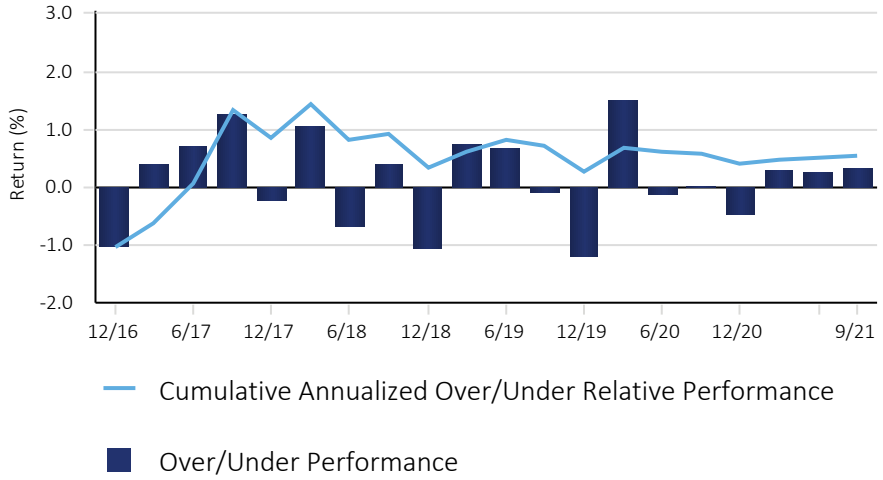
INTECH Global AC Enhanced Index Fund vs IM Global Equity (SA+CF+MF)

Periods Ended September 30, 2021

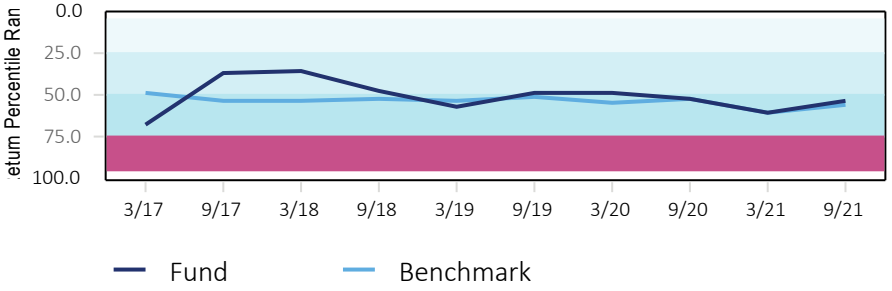
Comparative Performance



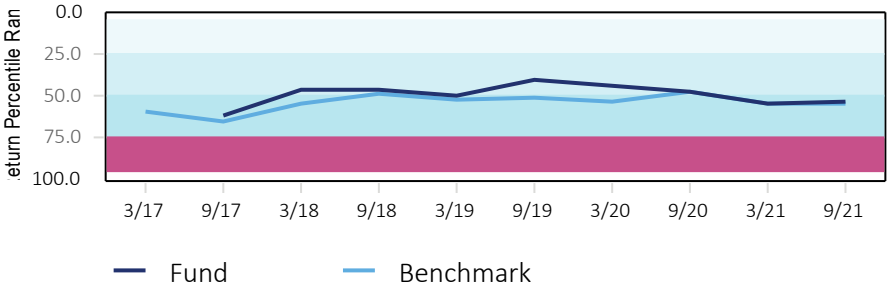
Relative Performance



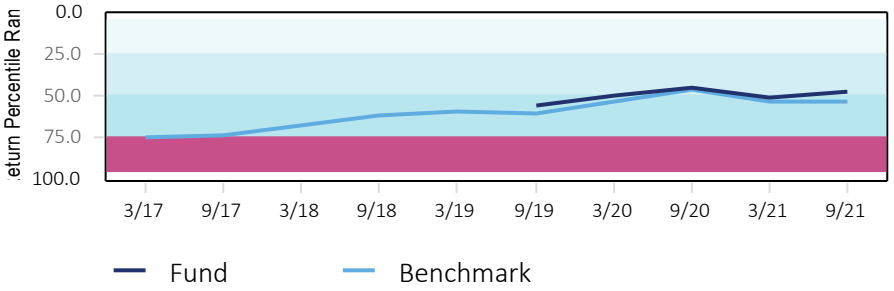
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking

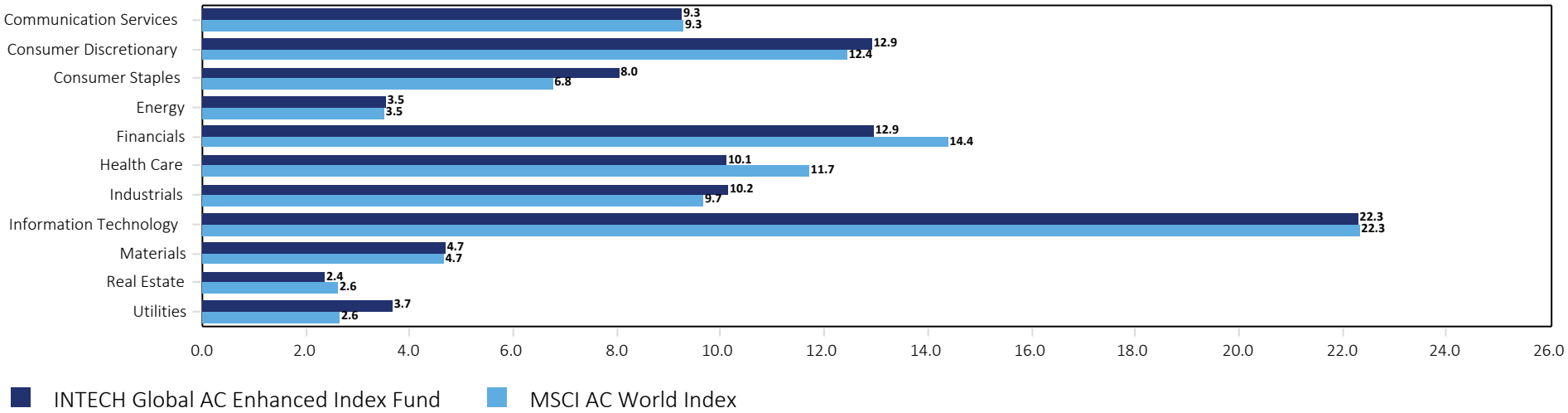


Portfolio Characteristics

INTECH Global AC Enhanced Index Fund

Periods Ended As of September 30, 2021

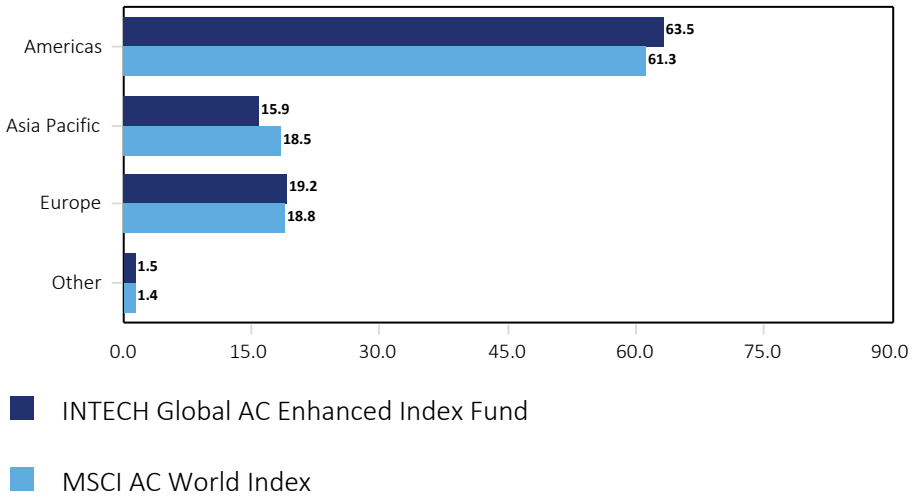
Sector Weights (%)



Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap $	329,174,612,719	348,943,284,815
Median Mkt. Cap $	21,723,146,320	13,589,282,145
Price/Earnings ratio	18.6	19.8
Price/Book ratio	3.7	3.7
5 Yr. EPS Growth Rate (%)	16.8	17.7
Current Yield (%)	2.3	1.9
Beta (5 Years, Monthly)	0.97	1.00
Number of Stocks	1,513	2,979

Region Allocation

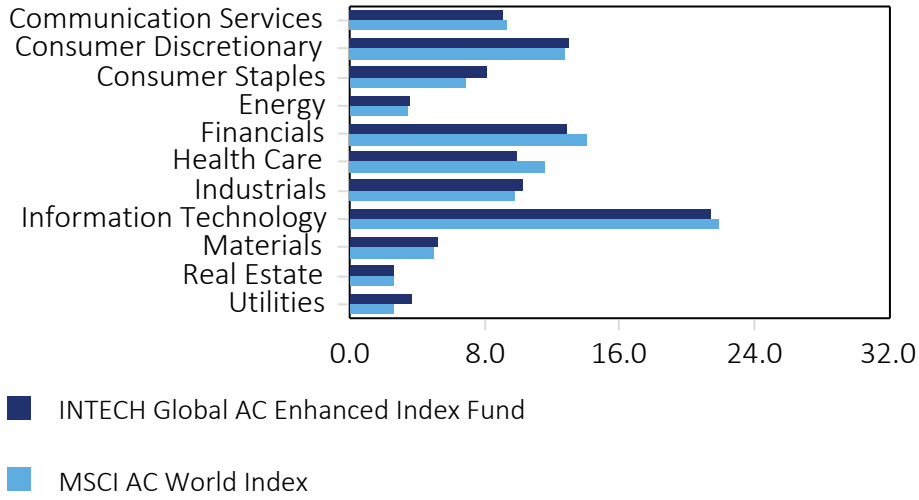


Buy and Hold Currency Attribution Graph

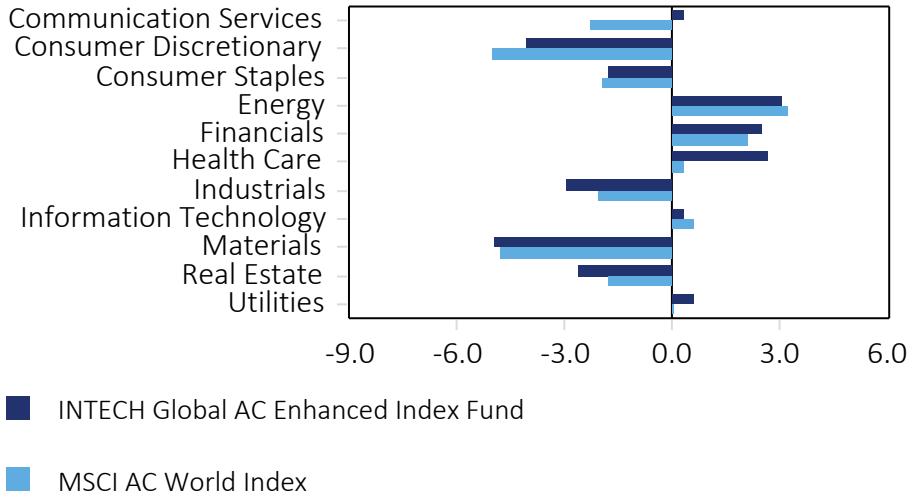
INTECH Global AC Enhanced Index Fund

Periods Ended 1 Quarter Ending September 30, 2021

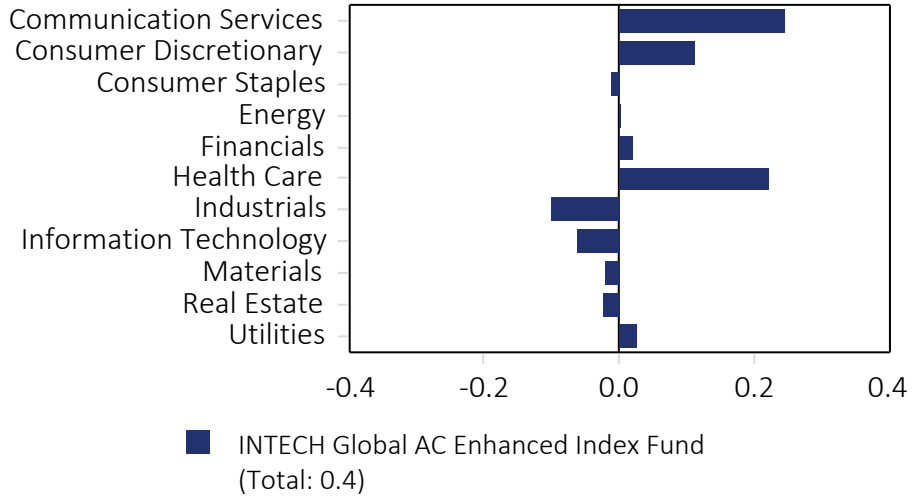
Sector Allocation



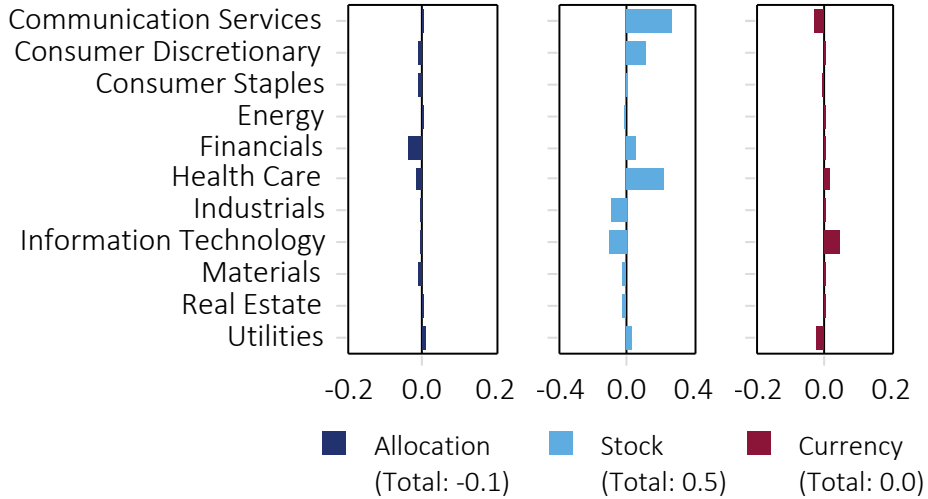
Sector Performance



Sector Total Attribution



Sector Performance Attribution

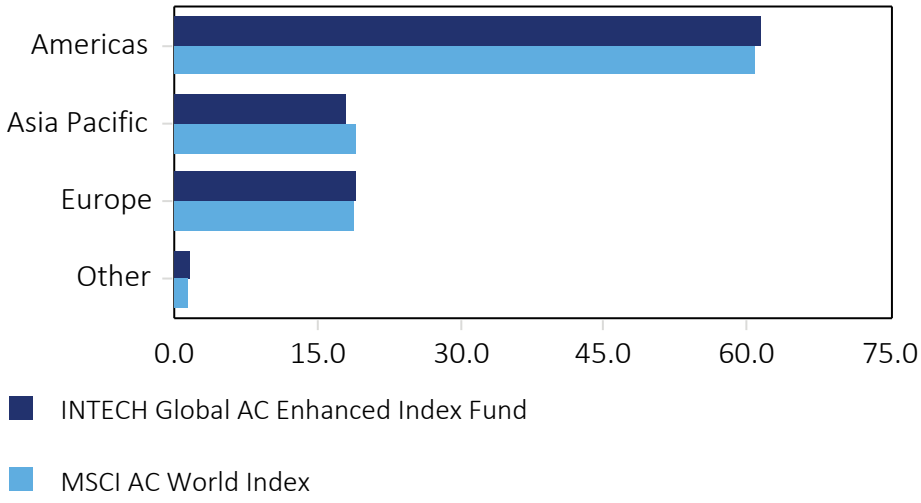


Buy and Hold Currency Attribution Graph

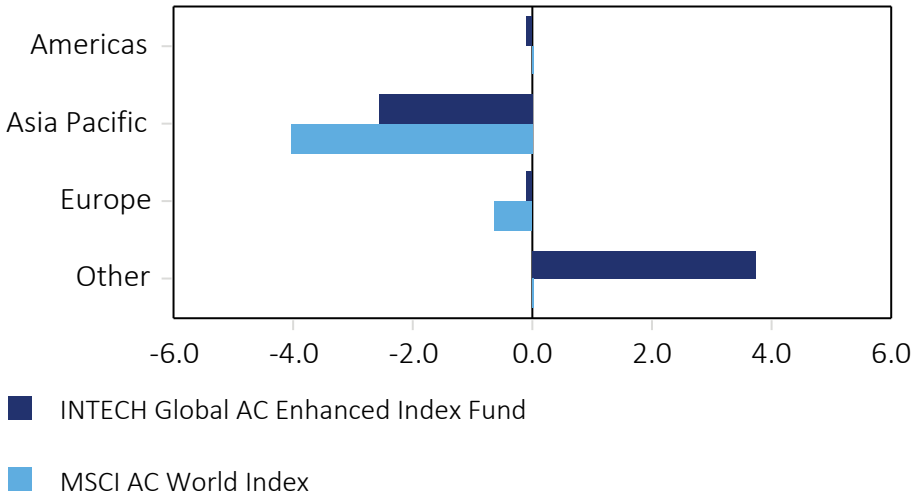
INTECH Global AC Enhanced Index Fund

Periods Ended 1 Quarter Ending September 30, 2021

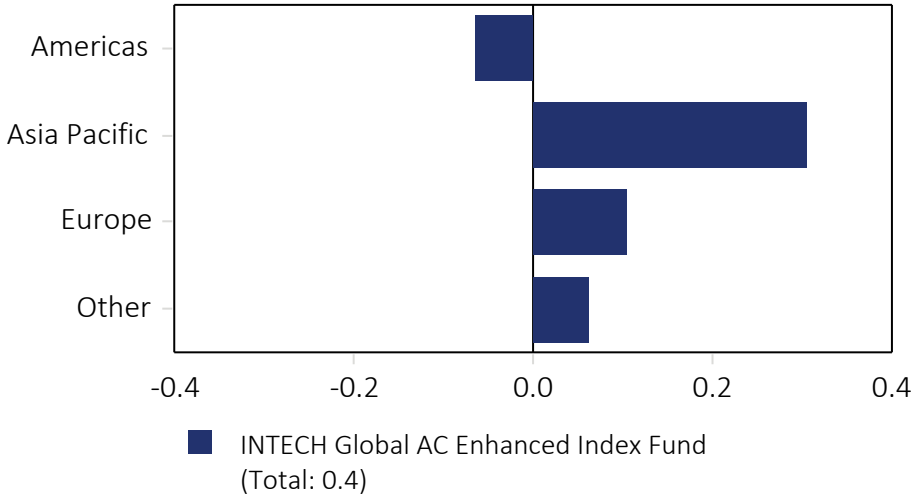
Region Allocation



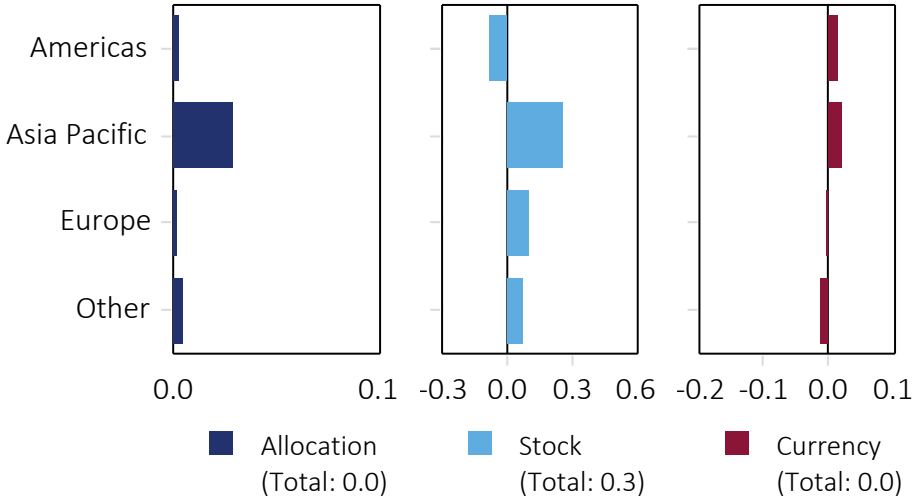
Region Performance



Region Total Attribution



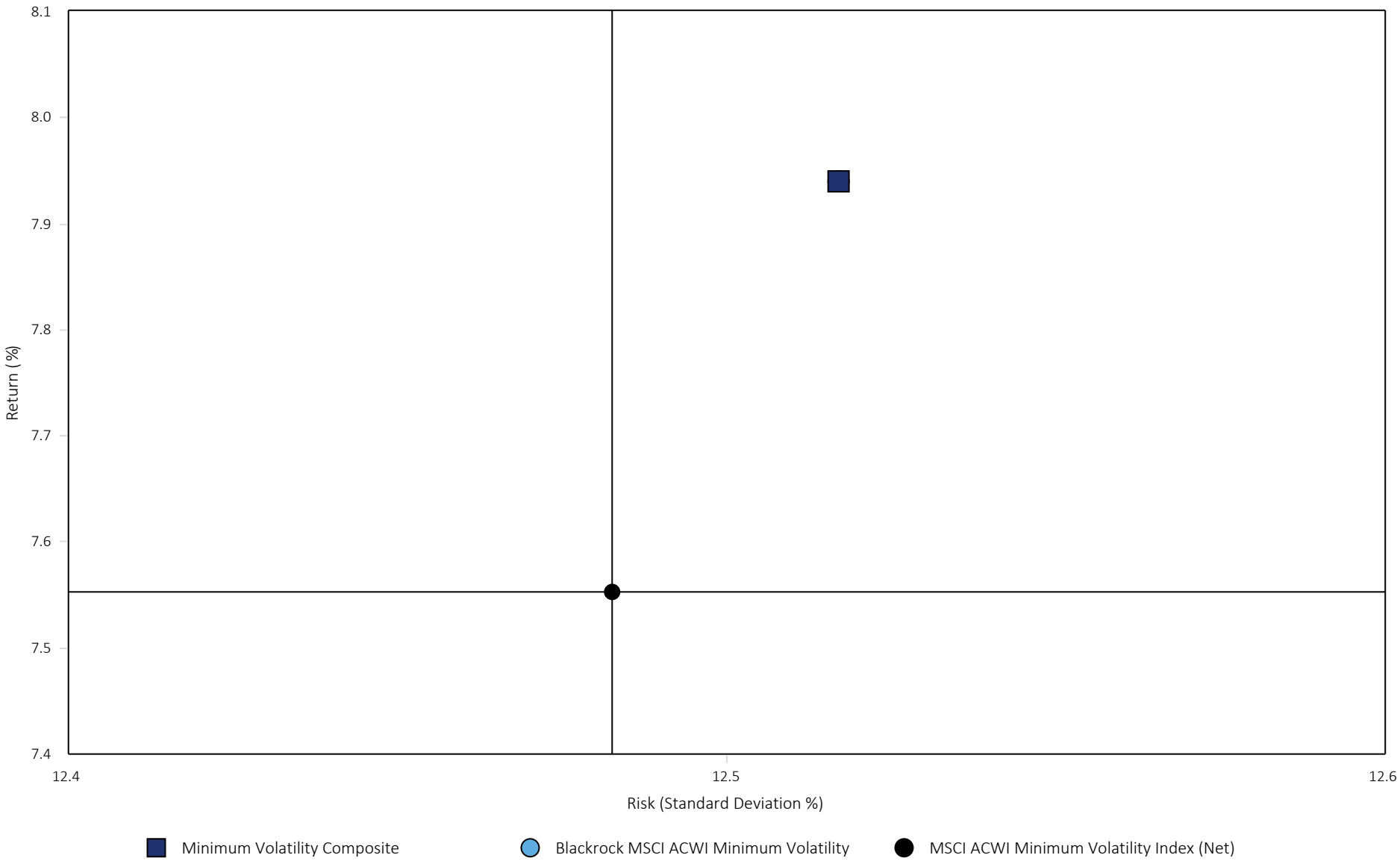
Region Performance Attribution



Risk vs. Return

Minimum Volatility Composite

Periods Ended 3 Years Ending September 30, 2021



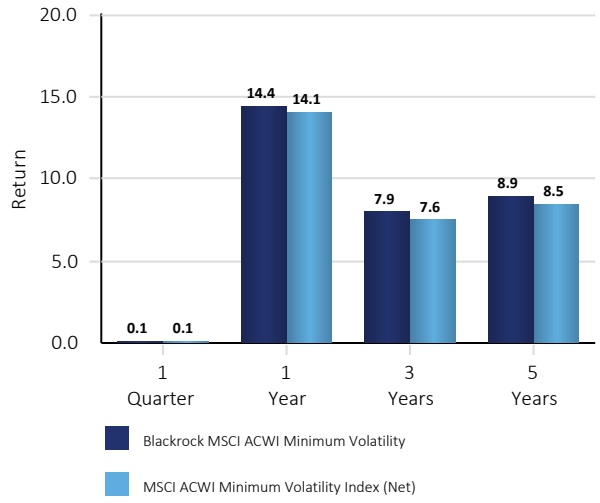
Calculation based on monthly periodicity.

Performance Summary

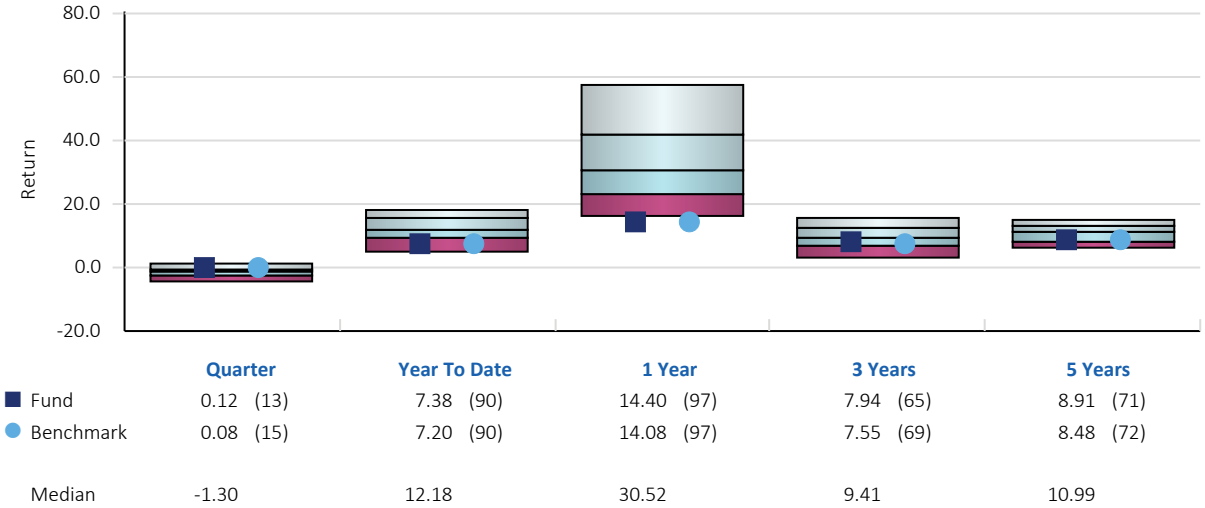
Blackrock MSCI ACWI Minimum Volatility

Periods Ended September 30, 2021

Comparative Performance

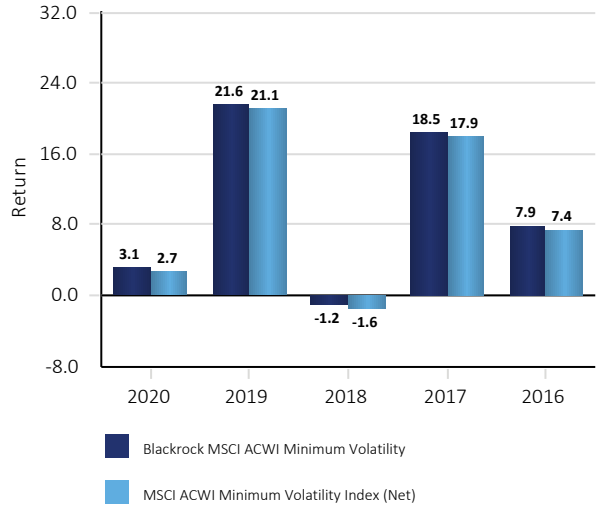


Peer Group Analysis: IM Global Large Cap Value Equity (SA+CF)

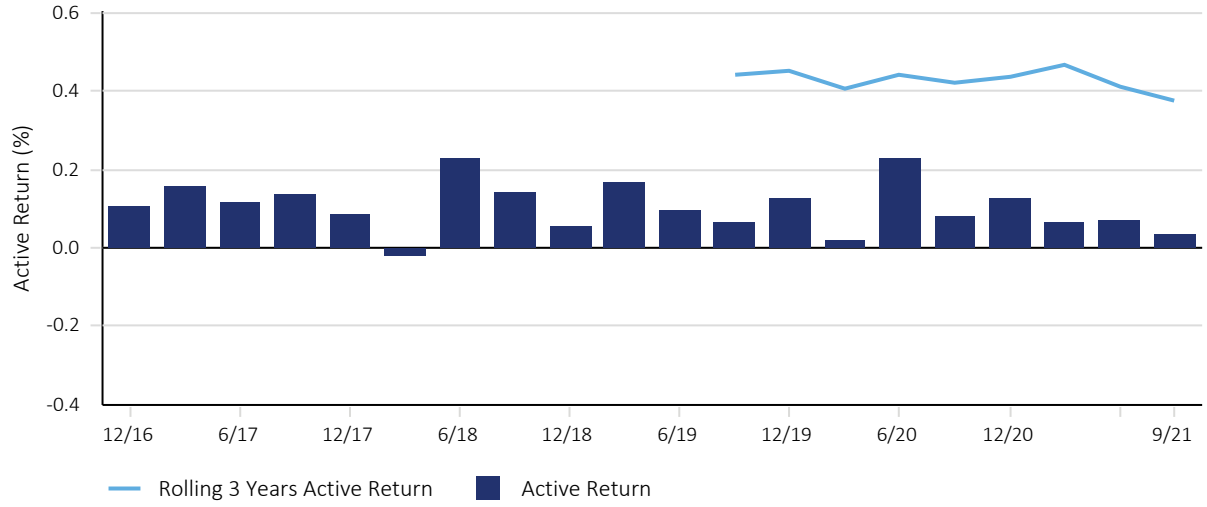


	Quarter	Year To Date	1 Year	3 Years	5 Years
Fund	0.12 (13)	7.38 (90)	14.40 (97)	7.94 (65)	8.91 (71)
Benchmark	0.08 (15)	7.20 (90)	14.08 (97)	7.55 (69)	8.48 (72)
Median	-1.30	12.18	30.52	9.41	10.99

Comparative Performance



Rolling 3 Years Performance

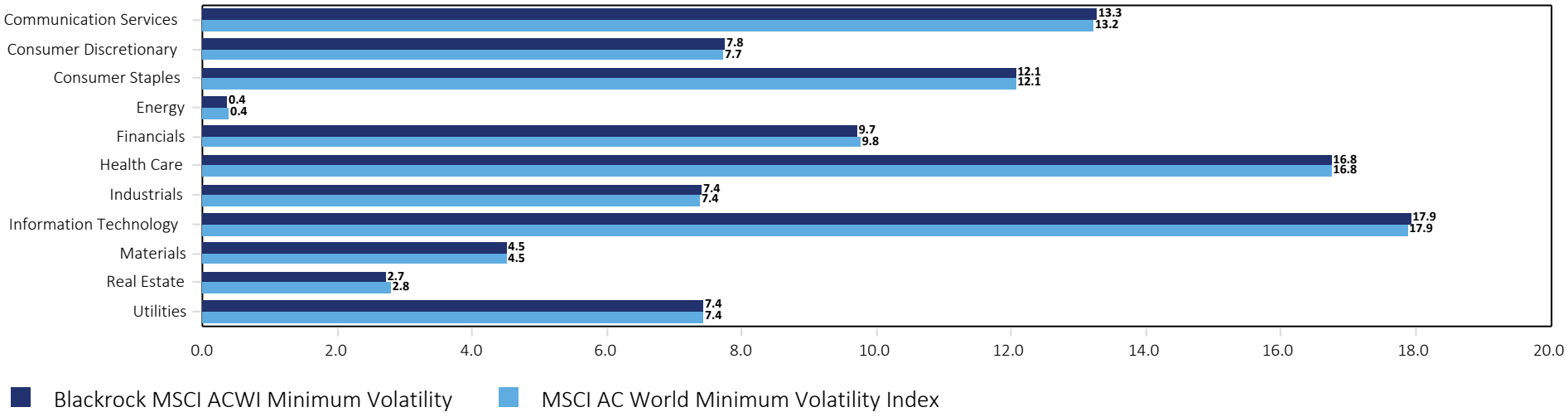


Portfolio Characteristics

Blackrock MSCI ACWI Minimum Volatility

Periods Ended As of September 30, 2021

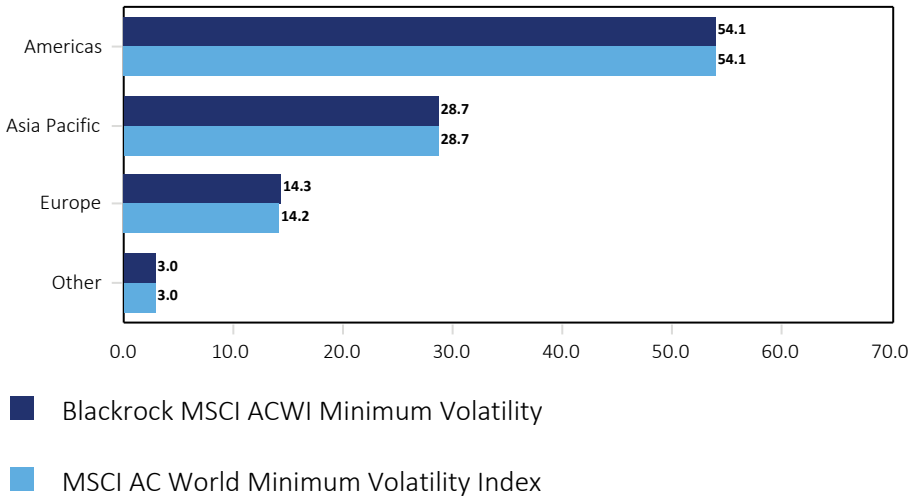
Sector Weights (%)



Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap $	102,538,274,428	102,901,253,146
Median Mkt. Cap $	22,676,272,039	22,492,345,289
Price/Earnings ratio	21.7	21.7
Price/Book ratio	3.6	3.6
5 Yr. EPS Growth Rate (%)	12.0	11.9
Current Yield (%)	2.2	2.2
Beta (5 Years, Monthly)	1.00	1.00
Number of Stocks	403	396

Region Allocation

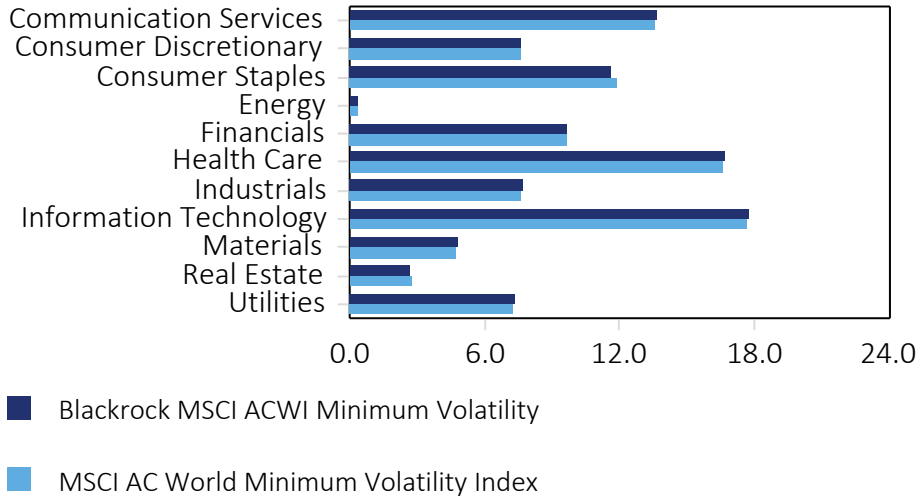


Buy and Hold Currency Attribution Graph

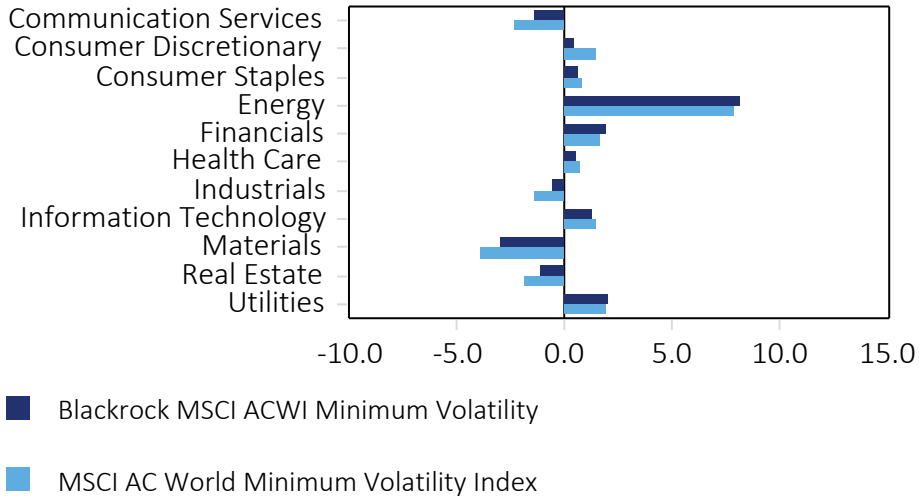
Blackrock MSCI ACWI Minimum Volatility

Periods Ended 1 Quarter Ending September 30, 2021

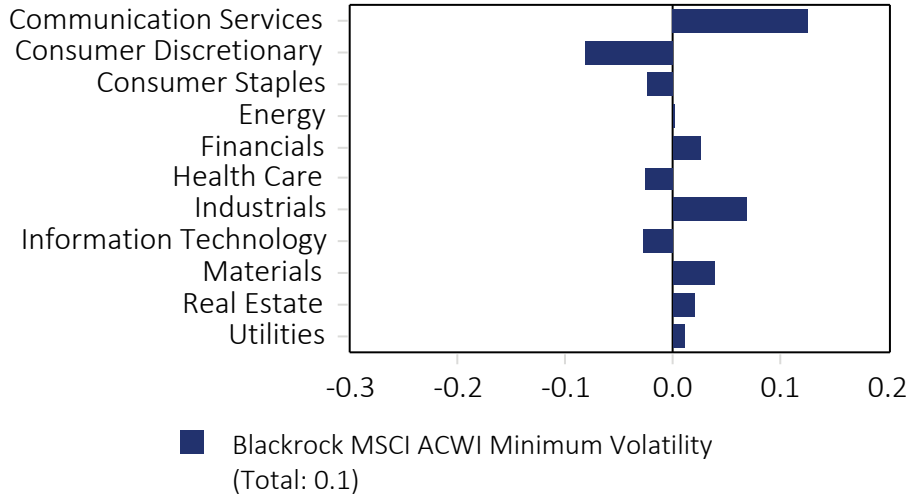
Sector Allocation



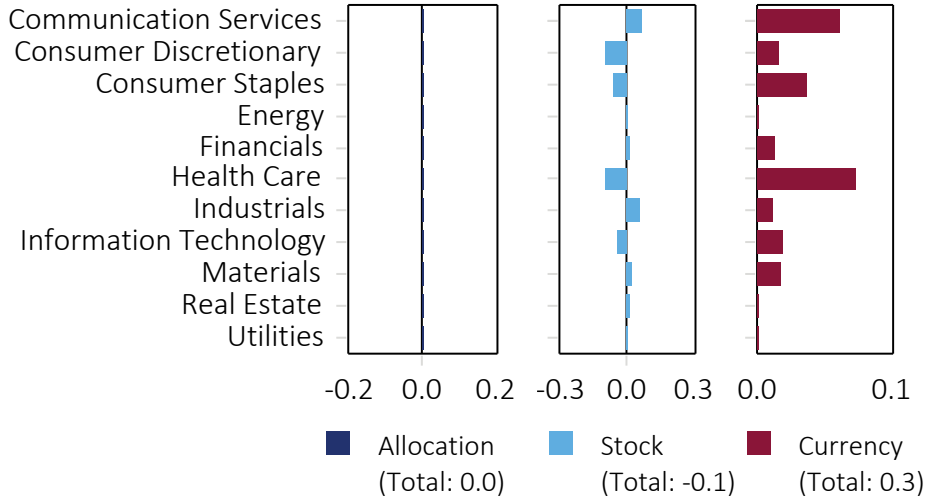
Sector Performance



Sector Total Attribution



Sector Performance Attribution

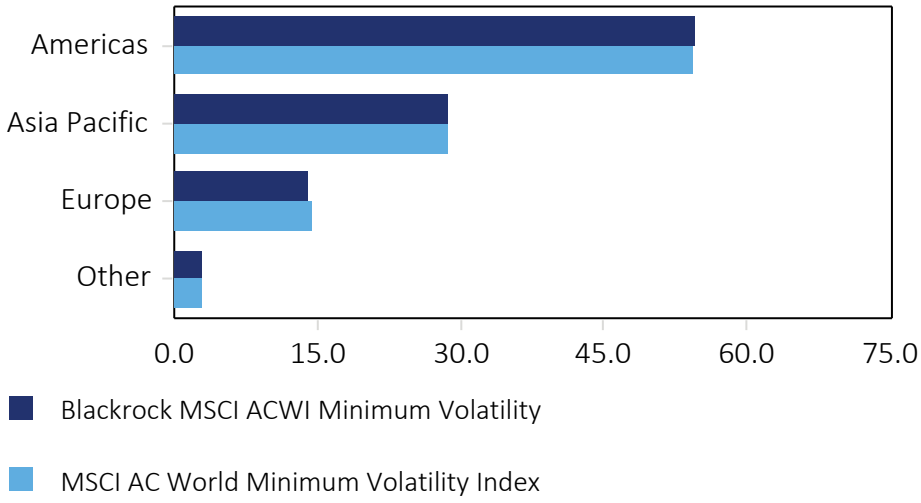


Buy and Hold Currency Attribution Graph

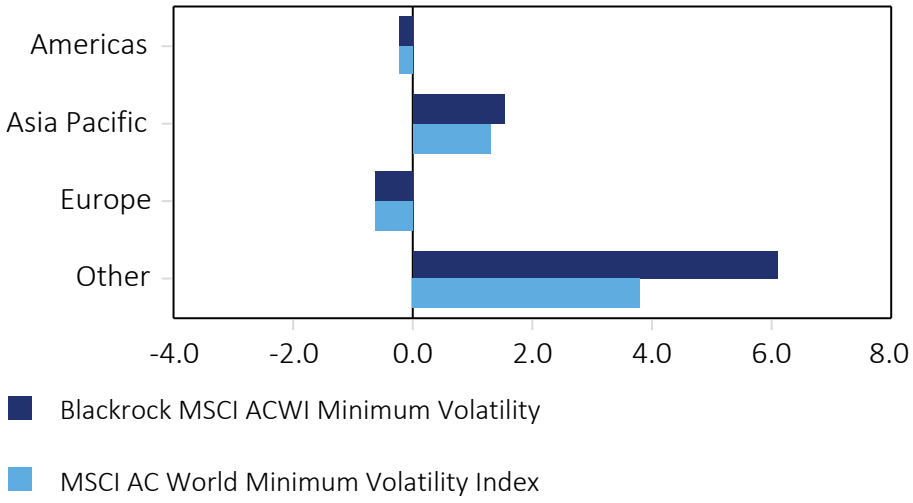
Blackrock MSCI ACWI Minimum Volatility

Periods Ended 1 Quarter Ending September 30, 2021

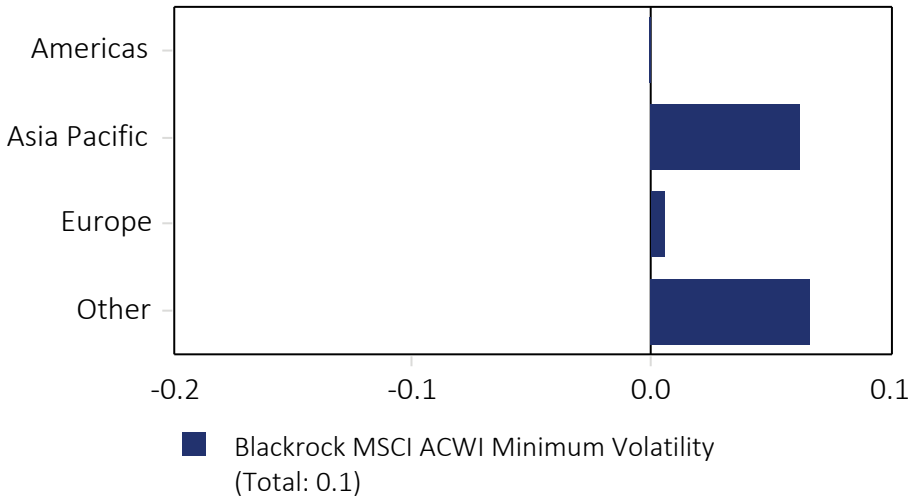
Region Allocation



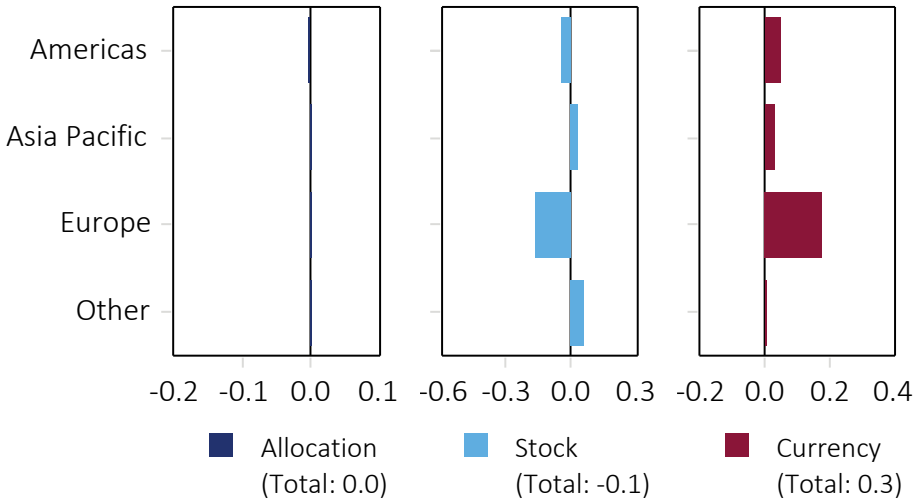
Region Performance



Region Total Attribution



Region Performance Attribution

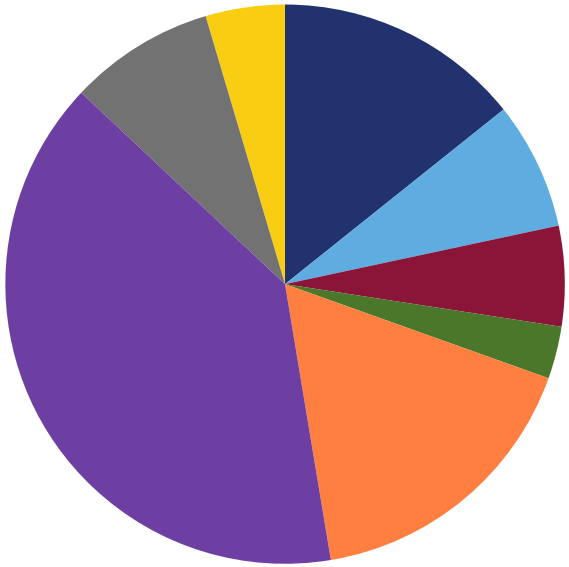


Asset Allocation By Manager

Total Fixed Income Composite

Periods Ended September 30, 2021

Sep-2021 : 728,462,307

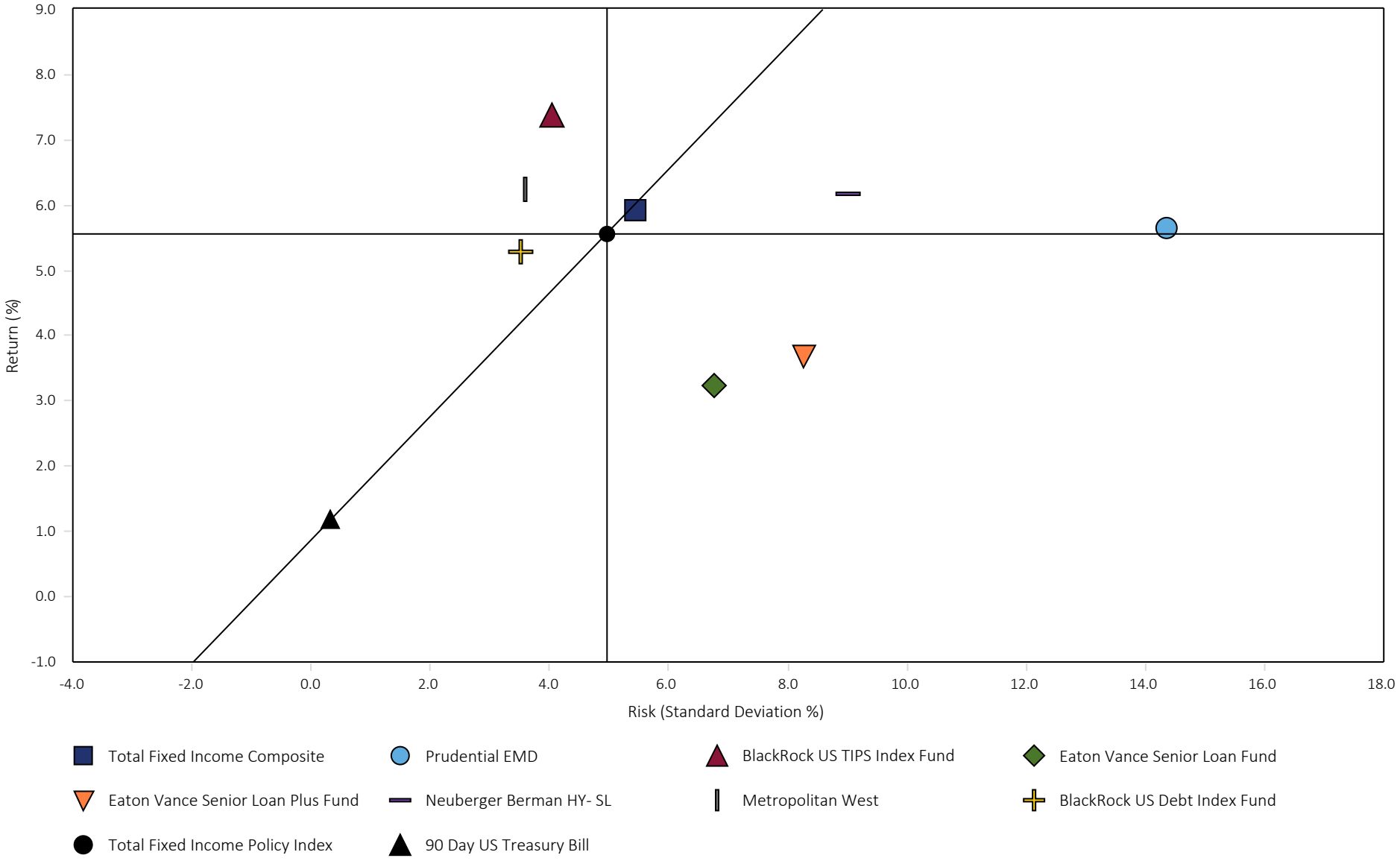


	Market Value $	Allocation (%)
Prudential EMD	103,904,709	14.3
BlackRock US TIPS Index Fund	53,724,223	7.4
Eaton Vance Senior Loan Fund	42,229,706	5.8
Eaton Vance Senior Loan Plus Fund	22,029,177	3.0
Neuberger Berman HY- SL	123,279,707	16.9
Metropolitan West	288,635,953	39.6
BlackRock US Debt Index Fund	61,265,158	8.4
BlackRock Long-Term Govt Bond	33,393,674	4.6

Risk vs. Return

Total Fixed Income Composite

Periods Ended 3 Years Ending September 30, 2021



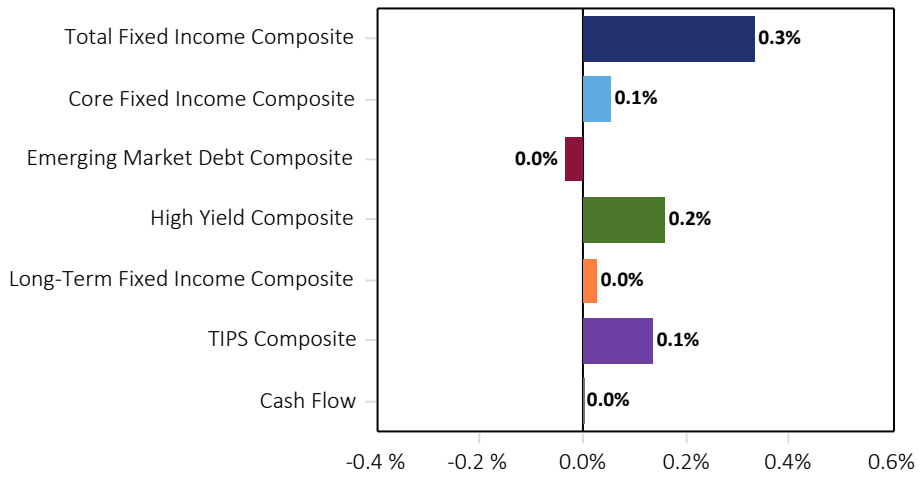
Calculation based on monthly periodicity.

Return and Risk Contribution

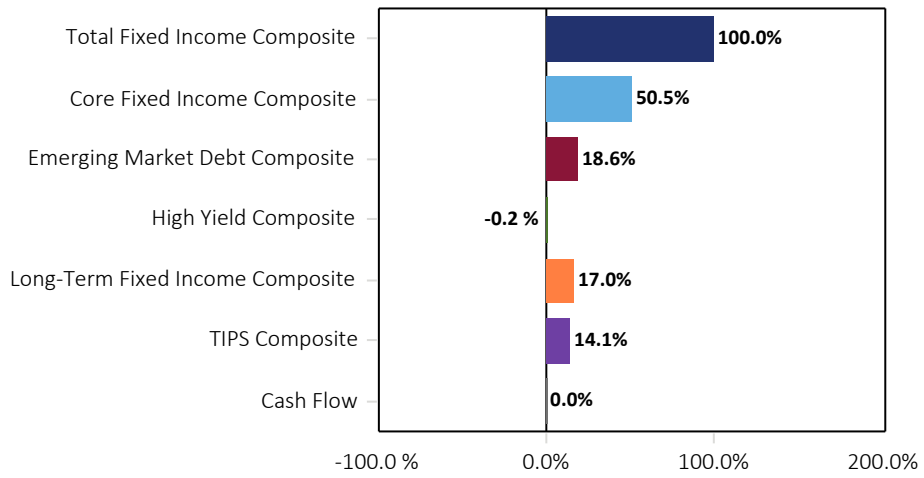
Total Fixed Income Composite

Periods Ended 1 Quarter September 30, 2021

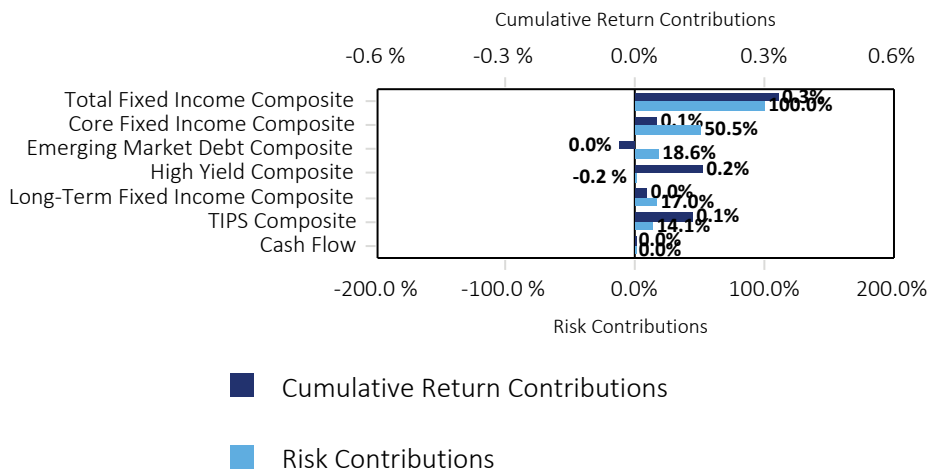
Cumulative Return Contributions



Risk Contributions



Cumulative Return and Risk Contributions



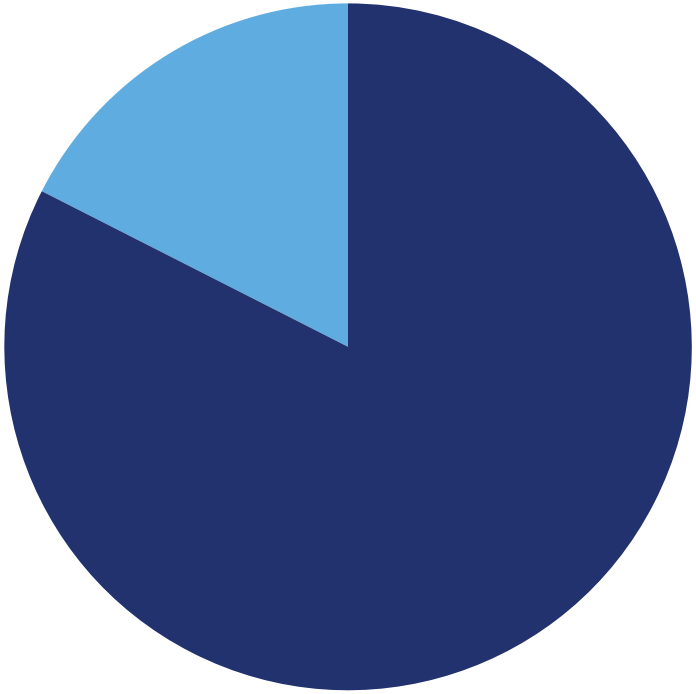
Cumulative Return Contributions History

Asset Allocation By Manager

Core Fixed Income Composite

Periods Ended September 30, 2021

Sep-2021 : 349,901,111

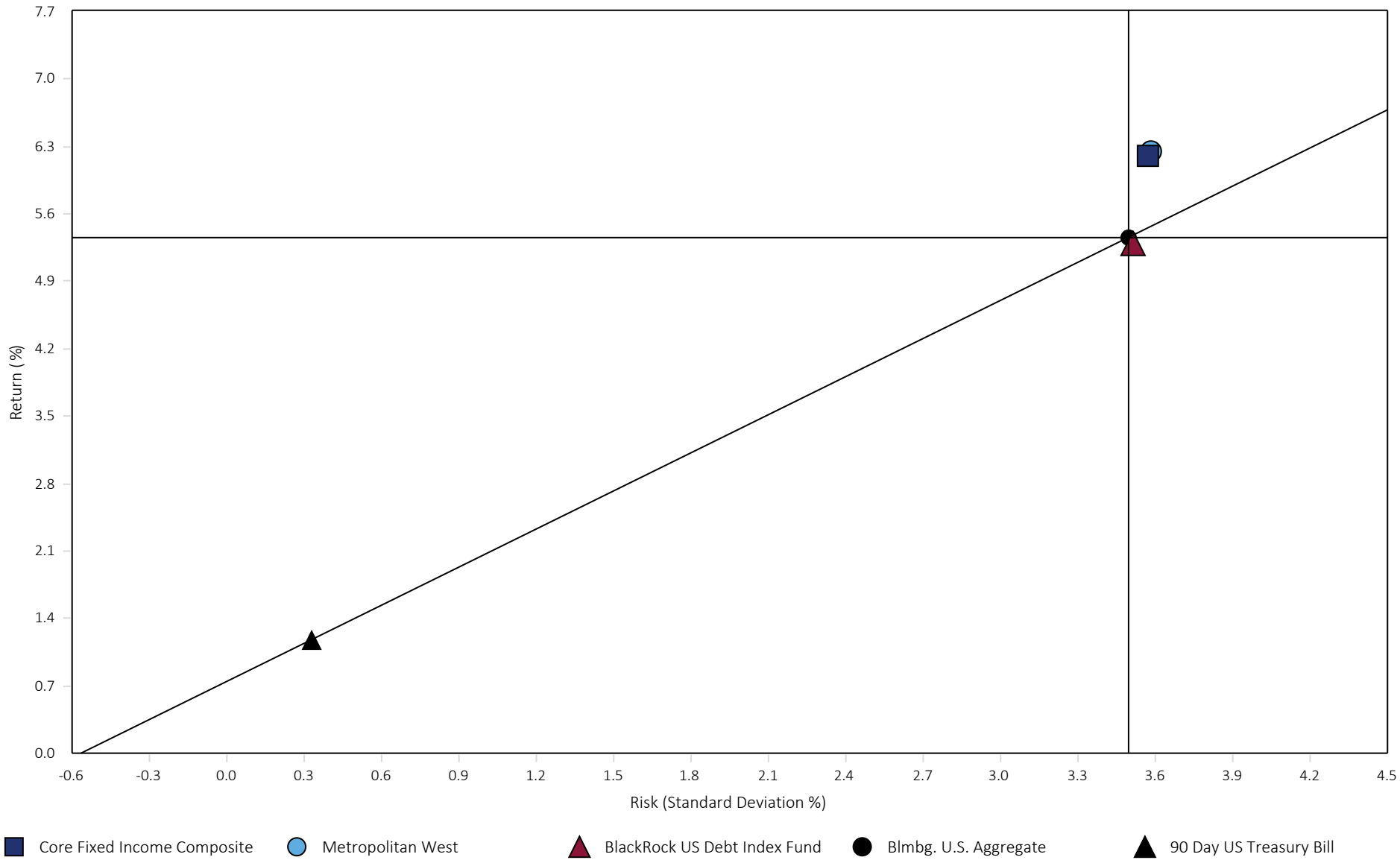


	Market Value $	Allocation (%)
Metropolitan West	288,635,953	82.5
BlackRock US Debt Index Fund	61,265,158	17.5

Risk vs. Return

Core Fixed Income Composite

Periods Ended 3 Years Ending September 30, 2021



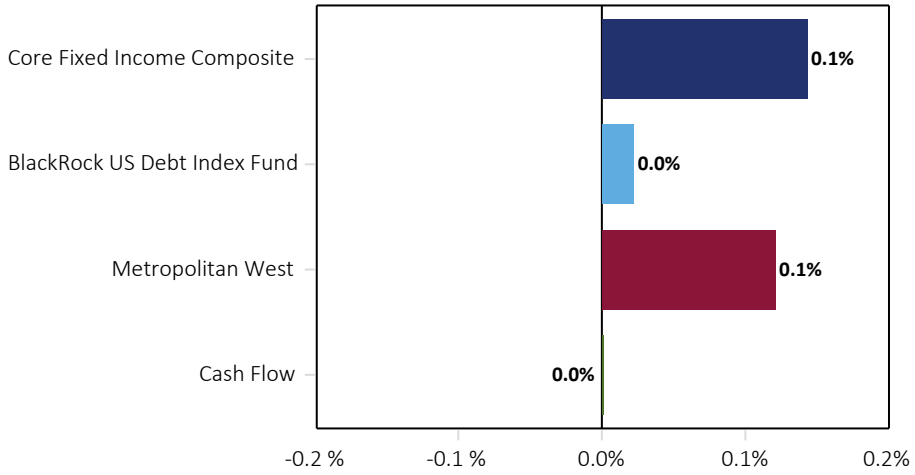
Calculation based on monthly periodicity.

Return and Risk Contribution

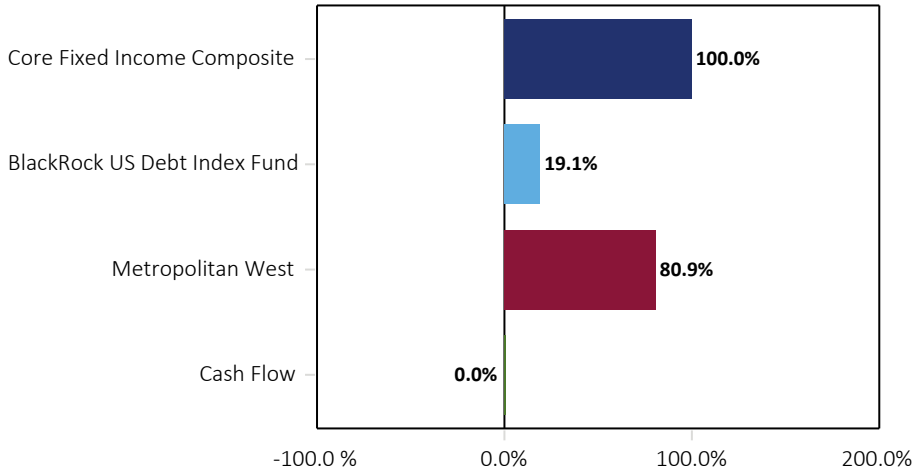
Core Fixed Income Composite

Periods Ended 1 Quarter September 30, 2021

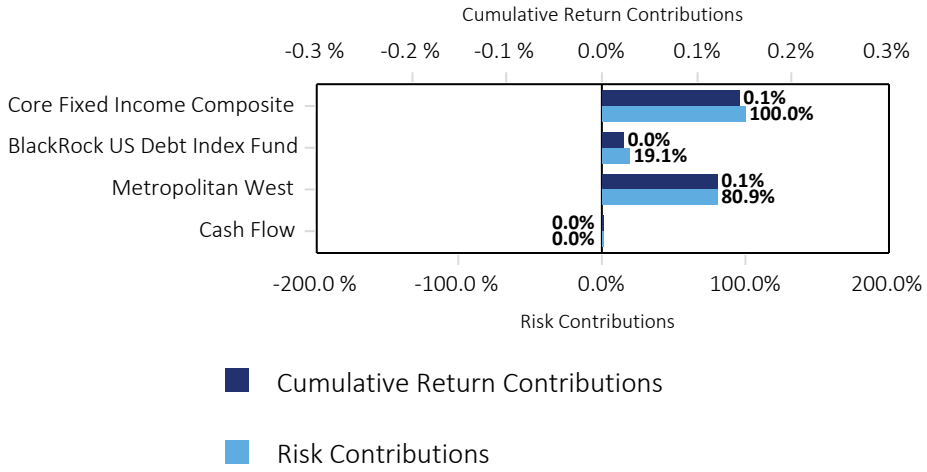
Cumulative Return Contributions



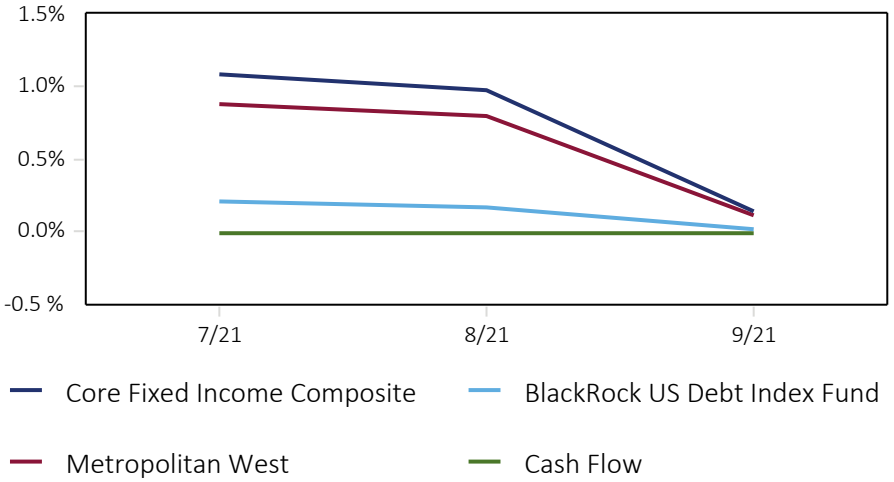
Risk Contributions



Cumulative Return and Risk Contributions



Cumulative Return Contributions History

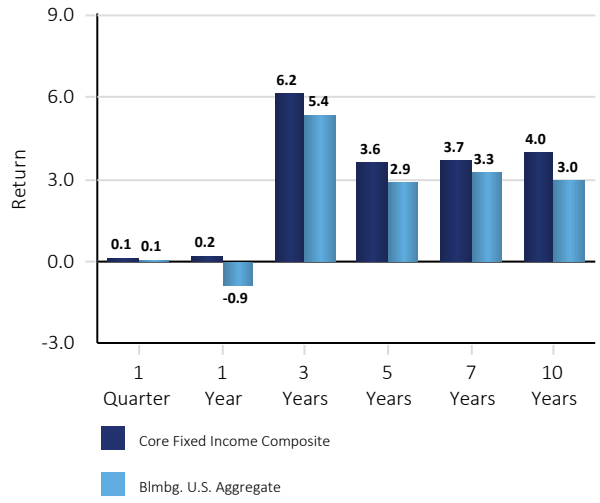


Performance Summary

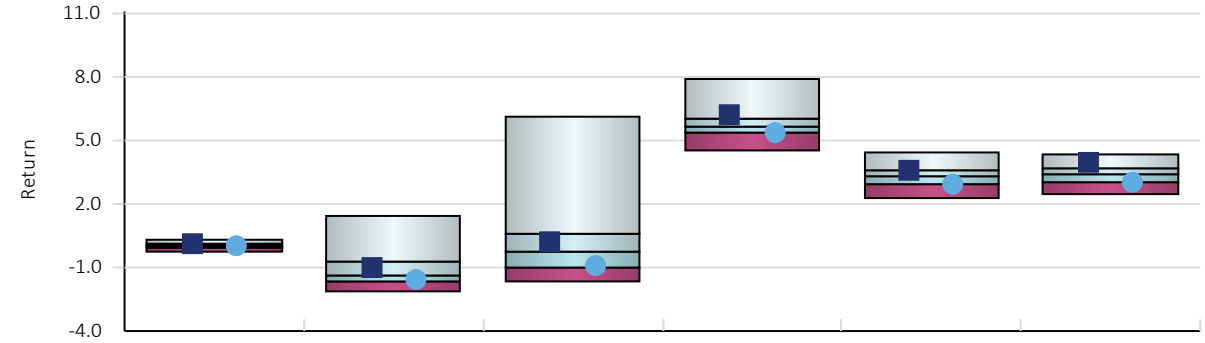
Core Fixed Income Composite

Periods Ended September 30, 2021

Comparative Performance

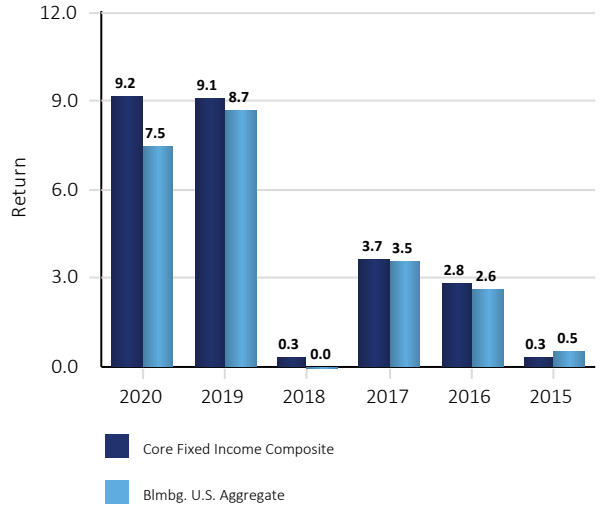


Peer Group Analysis: IM U.S. Broad Market Core Fixed Income (SA+CF)

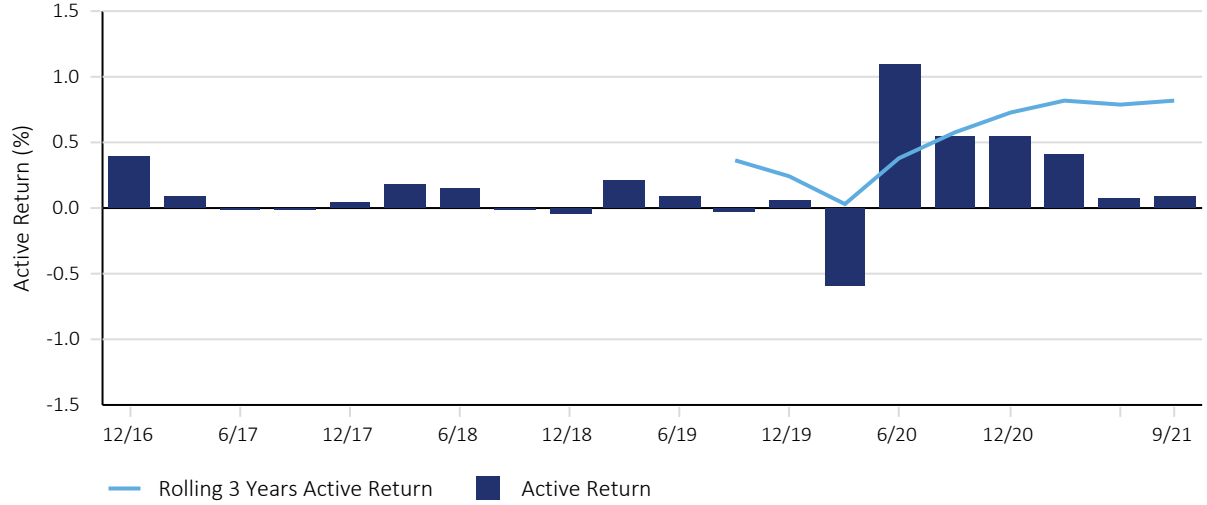


	Quarter	Year To Date	1 Year	3 Years	5 Years	10 Years
Fund	0.14 (17)	-0.97 (35)	0.23 (35)	6.21 (22)	3.62 (22)	4.01 (13)
Benchmark	0.05 (44)	-1.56 (62)	-0.90 (72)	5.35 (72)	2.94 (75)	3.01 (80)
Median	0.03	-1.38	-0.29	5.70	3.33	3.41

Comparative Performance



Rolling 3 Years Performance

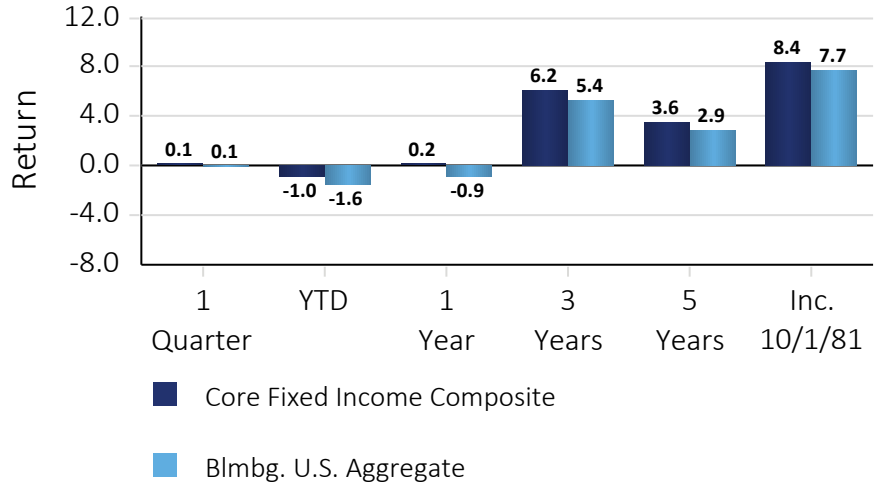


Manager Summary

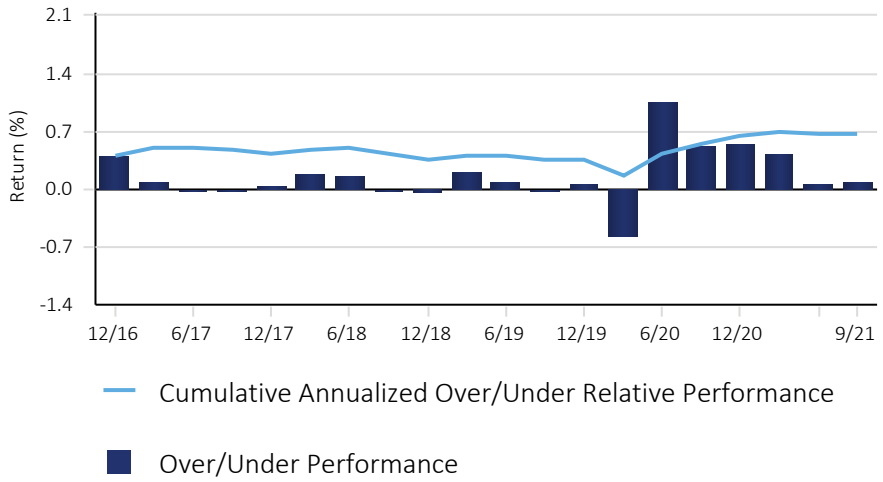
Core Fixed Income Composite vs IM U.S. Broad Market Core Fixed Income (SA+CF)

Periods Ended September 30, 2021

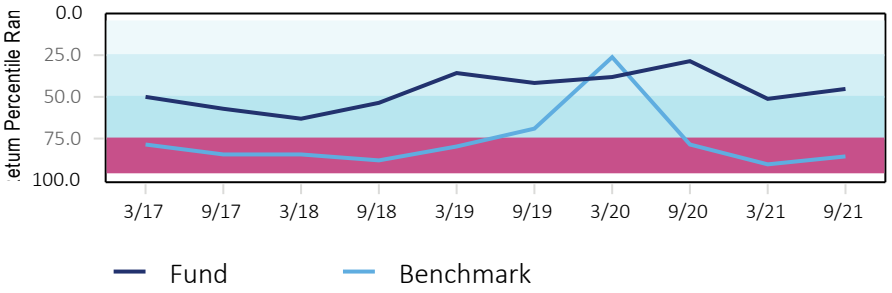
Comparative Performance



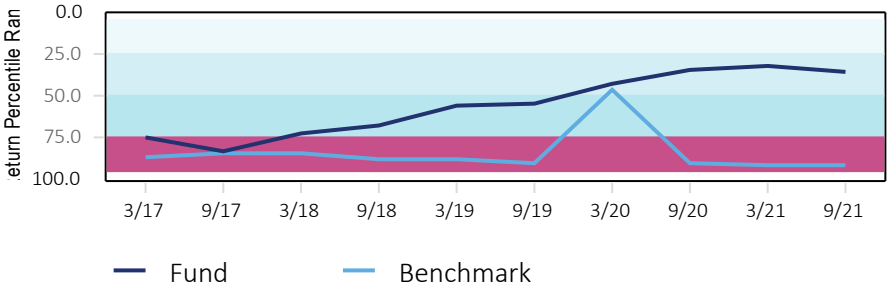
Relative Performance



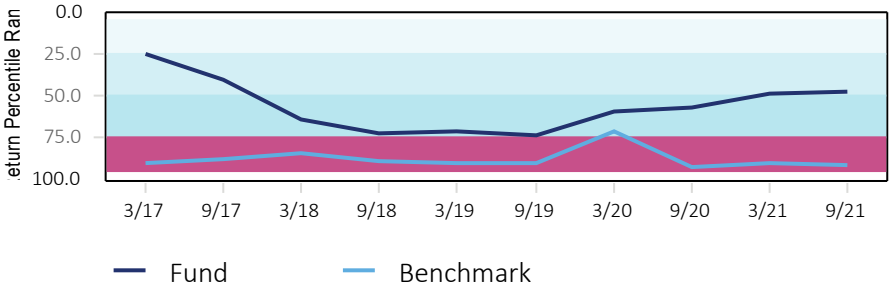
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking



Portfolio Characteristics

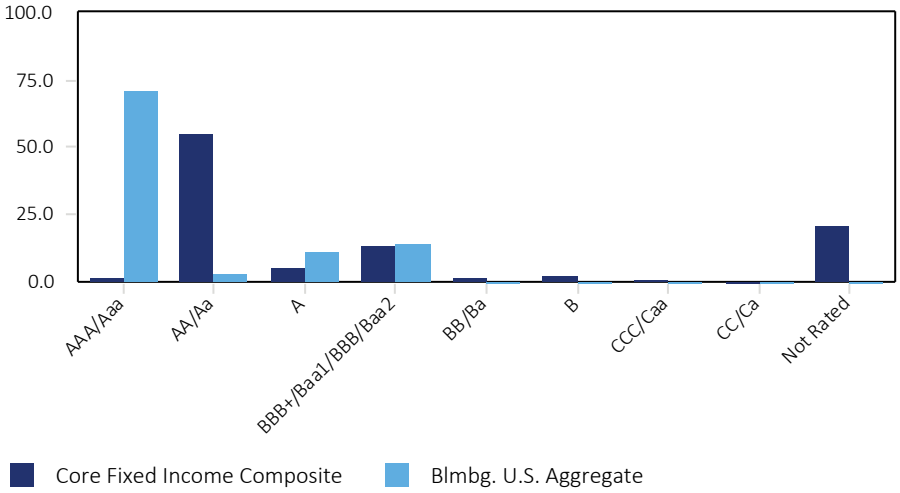
Core Fixed Income Composite vs Blmbg. U.S. Aggregate

Periods Ended As of September 30, 2021

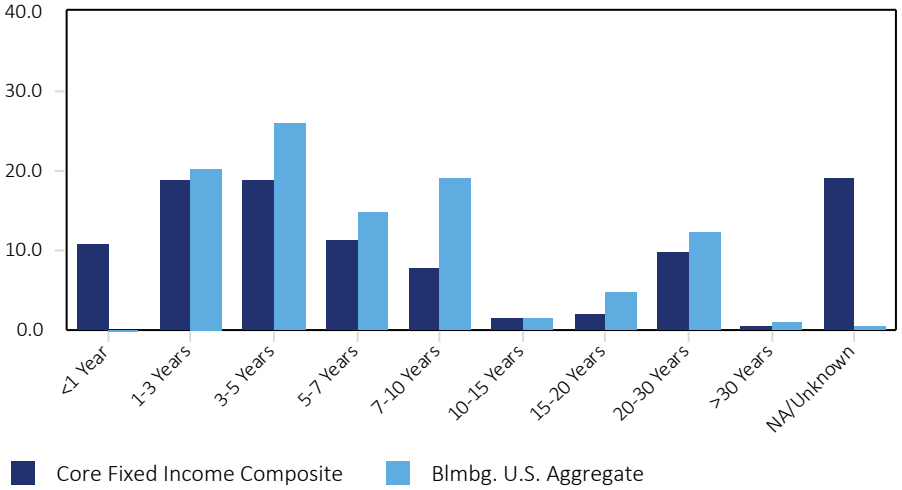
Portfolio Characteristics

	Portfolio	Benchmark
Avg. Maturity	7.22	8.54
Avg. Quality	A	AA
Convexity	0.32	0.15
Coupon Rate (%)	2.15	2.58
Current Yield		1.51
Modified Duration	5.59	6.76
Effective Duration	5.52	6.34
Spread Duration		
Yield To Maturity (%)	1.32	1.51
Yield To Worst	1.30	1.50
Market To Book Value		
Crediting Rate		
Crediting to Underlying Ratio		
Underlying Yield		

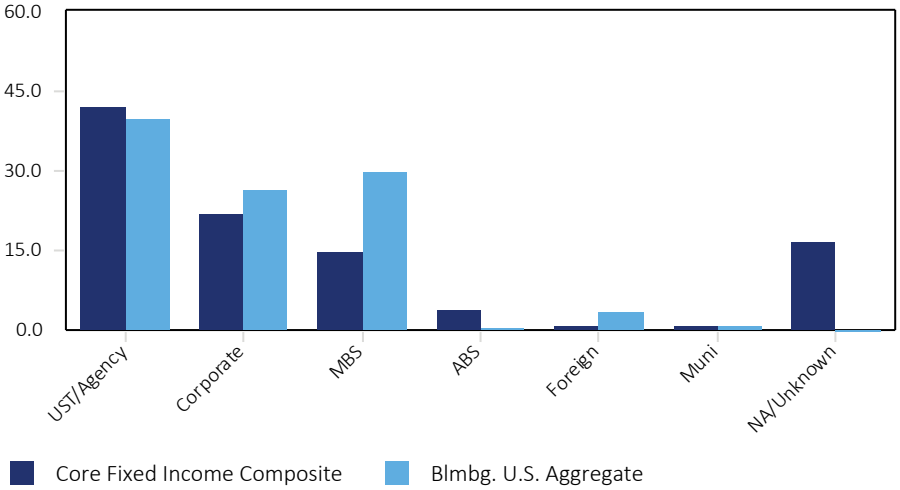
Credit Quality Distribution (%)



Maturity Distribution (%)



Sector Distribution (%)

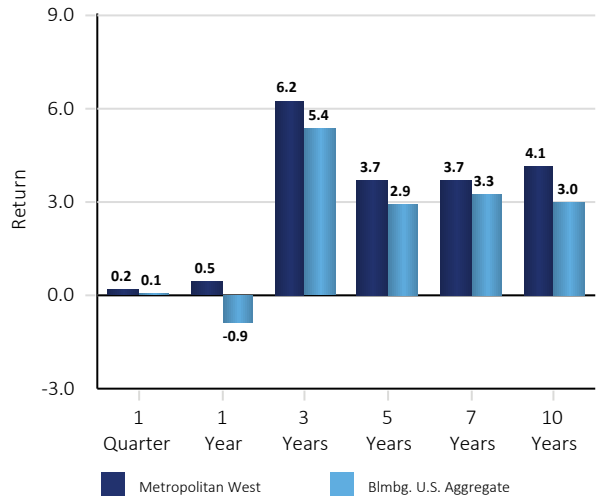


Performance Summary

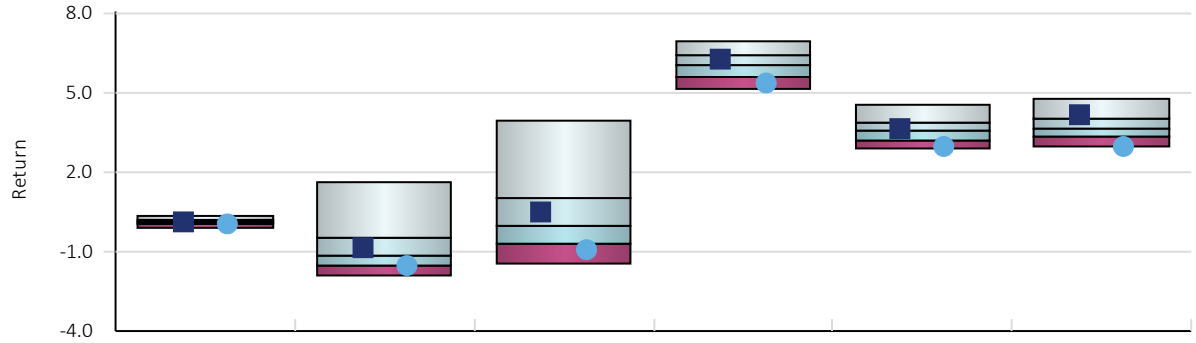
Metropolitan West

Periods Ended September 30, 2021

Comparative Performance

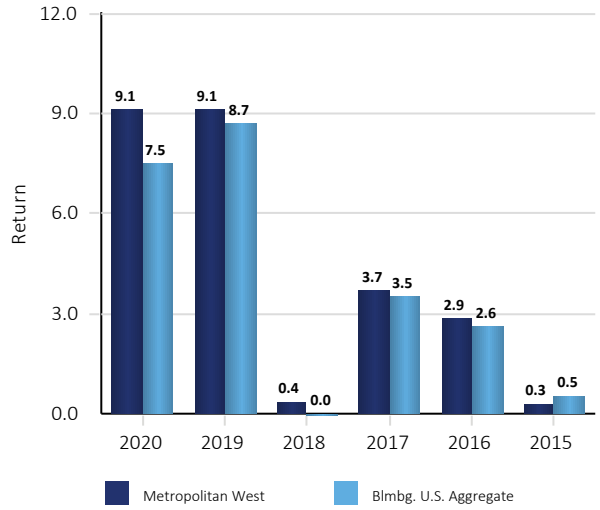


Peer Group Analysis: IM U.S. Broad Market Core Fixed Income (SA+CF)

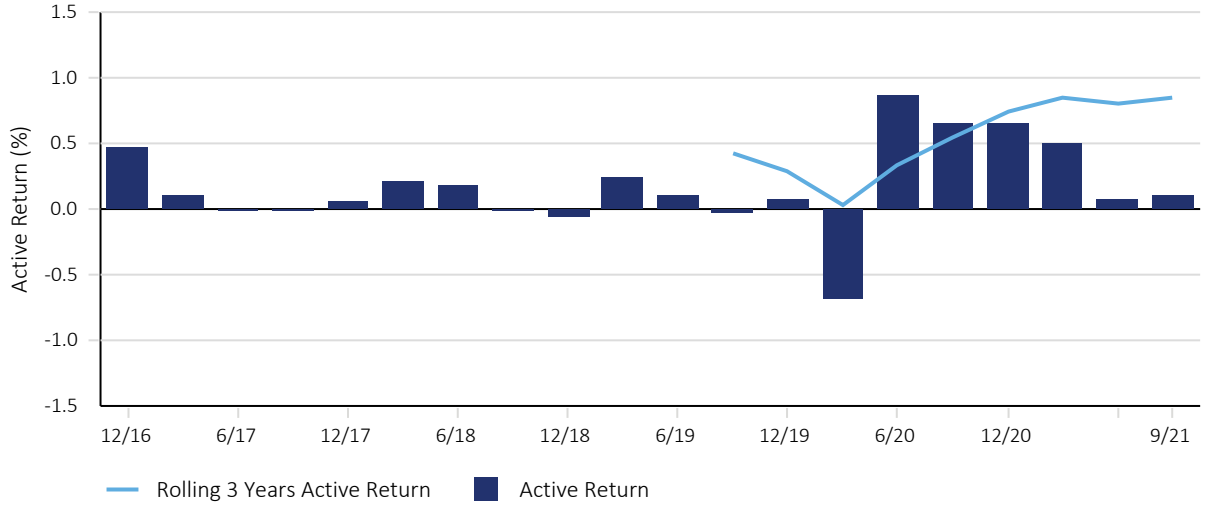


	Quarter	Year To Date	1 Year	3 Years	5 Years	10 Years
Fund	0.16 (35)	-0.85 (40)	0.47 (39)	6.25 (34)	3.68 (45)	4.14 (15)
Benchmark	0.05 (68)	-1.56 (79)	-0.90 (86)	5.35 (92)	2.94 (92)	3.01 (94)
Median	0.10	-1.15	0.00	6.05	3.59	3.66

Comparative Performance



Rolling 3 Years Performance

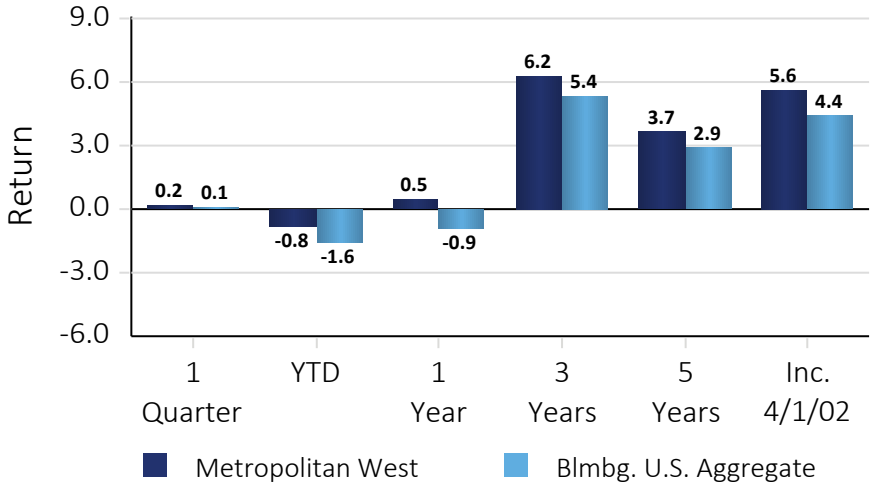


Manager Summary

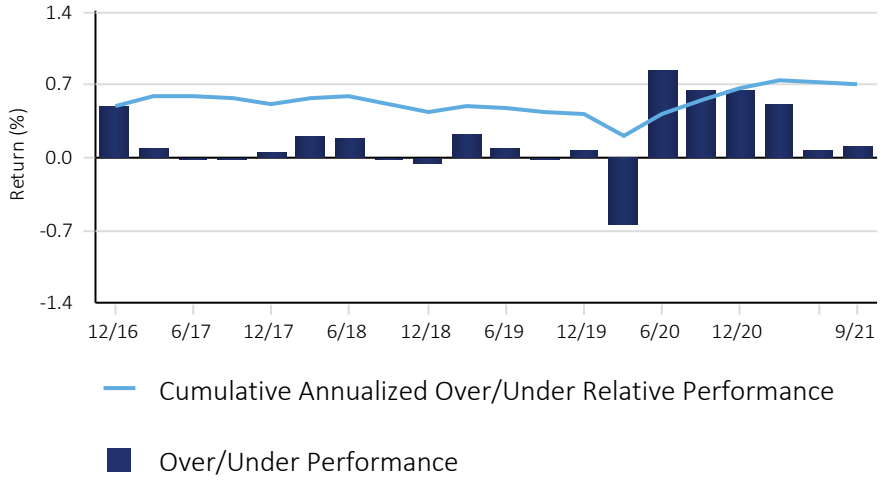
Metropolitan West vs IM U.S. Broad Market Core Fixed Income (SA+CF)

Periods Ended September 30, 2021

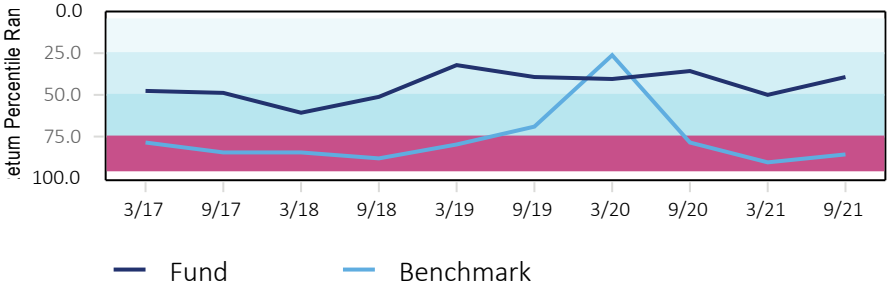
Comparative Performance



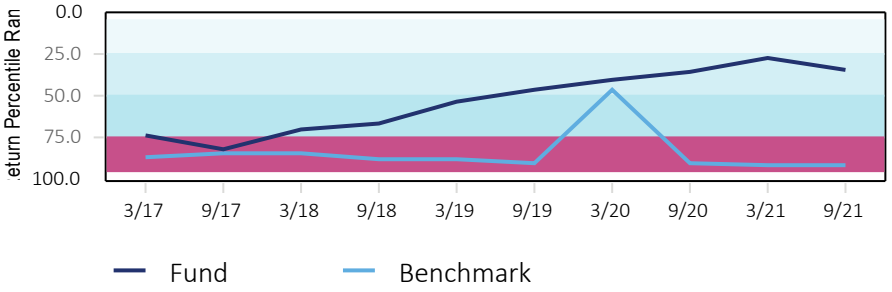
Relative Performance



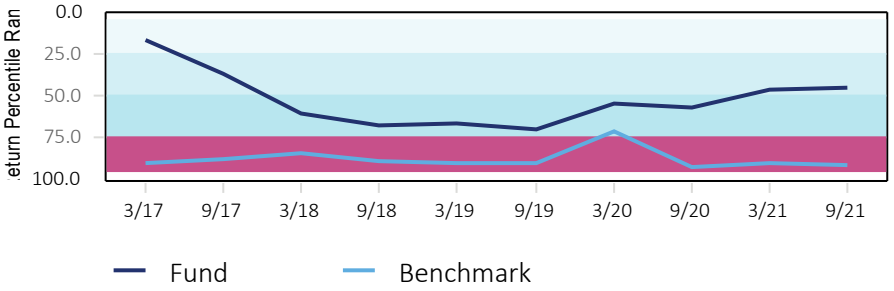
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking



Portfolio Characteristics

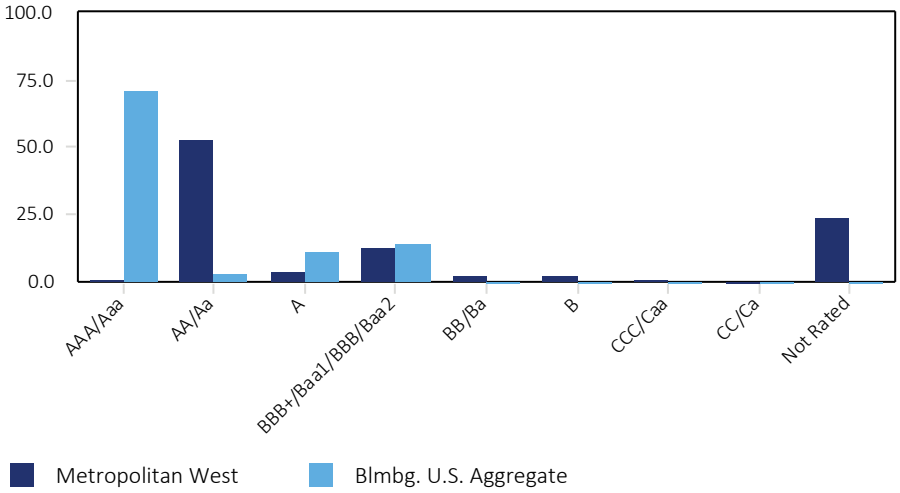
Metropolitan West vs Blmbg. U.S. Aggregate

Periods Ended As of September 30, 2021

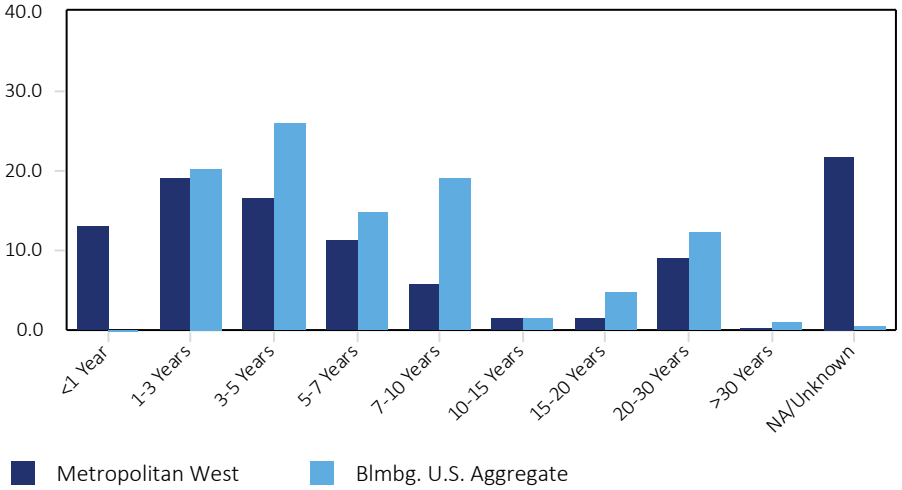
Portfolio Characteristics

	Portfolio	Benchmark
Avg. Maturity	6.90	8.54
Avg. Quality	A	AA
Convexity	0.33	0.15
Coupon Rate (%)	2.00	2.58
Current Yield		1.51
Modified Duration	5.32	6.76
Effective Duration	5.28	6.34
Spread Duration		
Yield To Maturity (%)	1.28	1.51
Yield To Worst	1.26	1.50
Market To Book Value		
Crediting Rate		
Crediting to Underlying Ratio		
Underlying Yield		

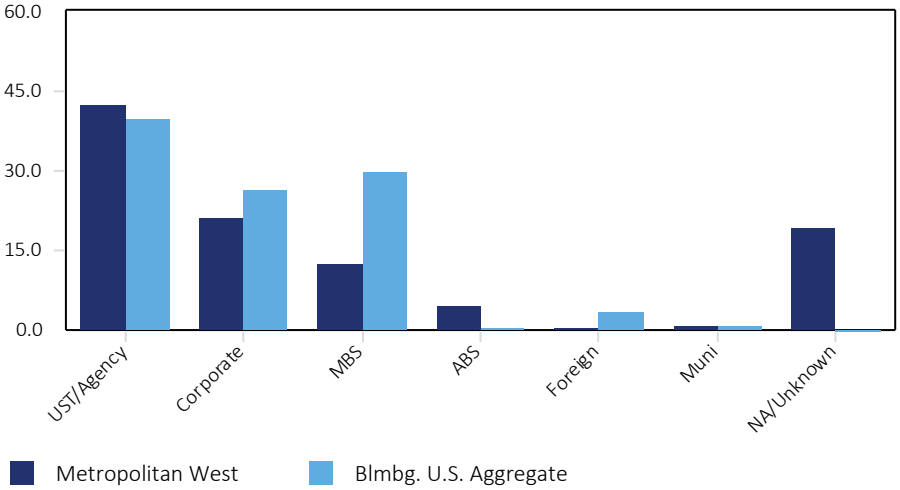
Credit Quality Distribution (%)



Maturity Distribution (%)



Sector Distribution (%)

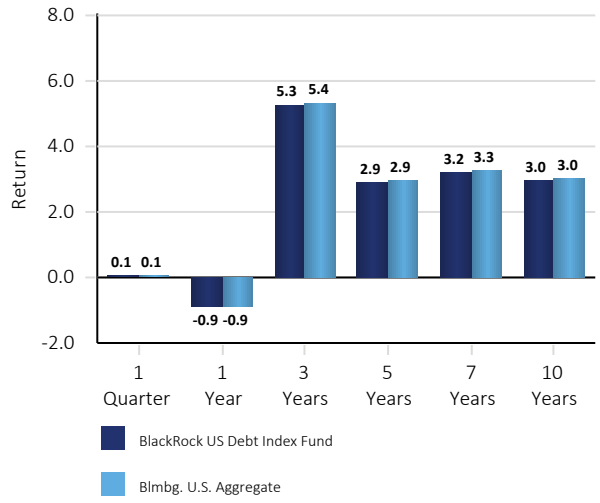


Performance Summary

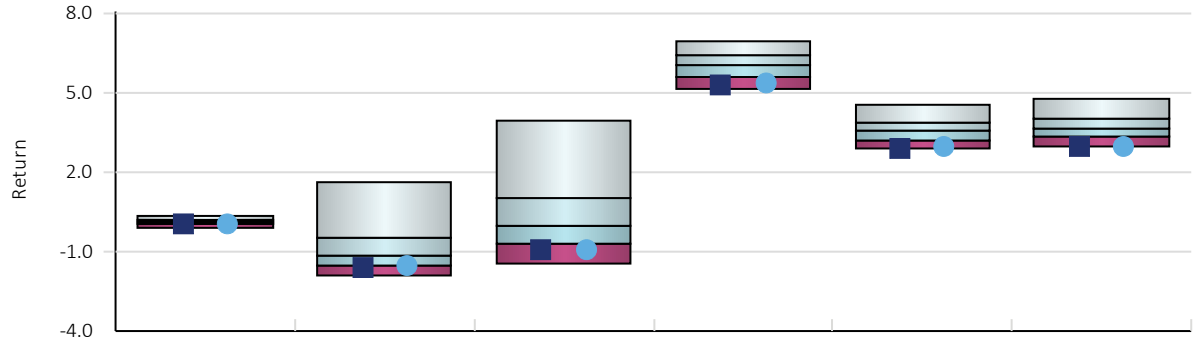
BlackRock US Debt Index Fund

Periods Ended September 30, 2021

Comparative Performance

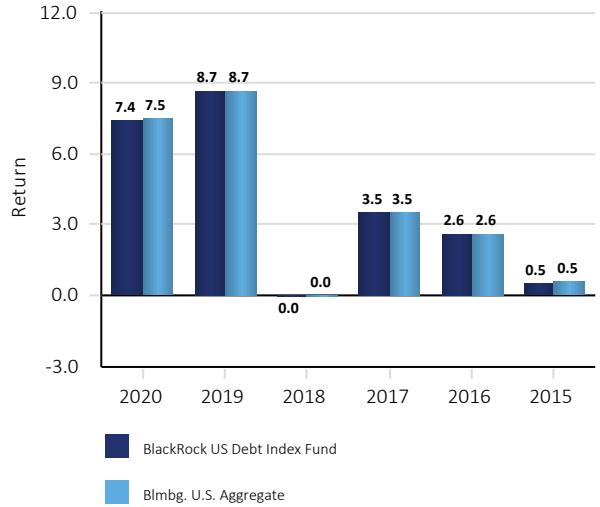


Peer Group Analysis: IM U.S. Broad Market Core Fixed Income (SA+CF)

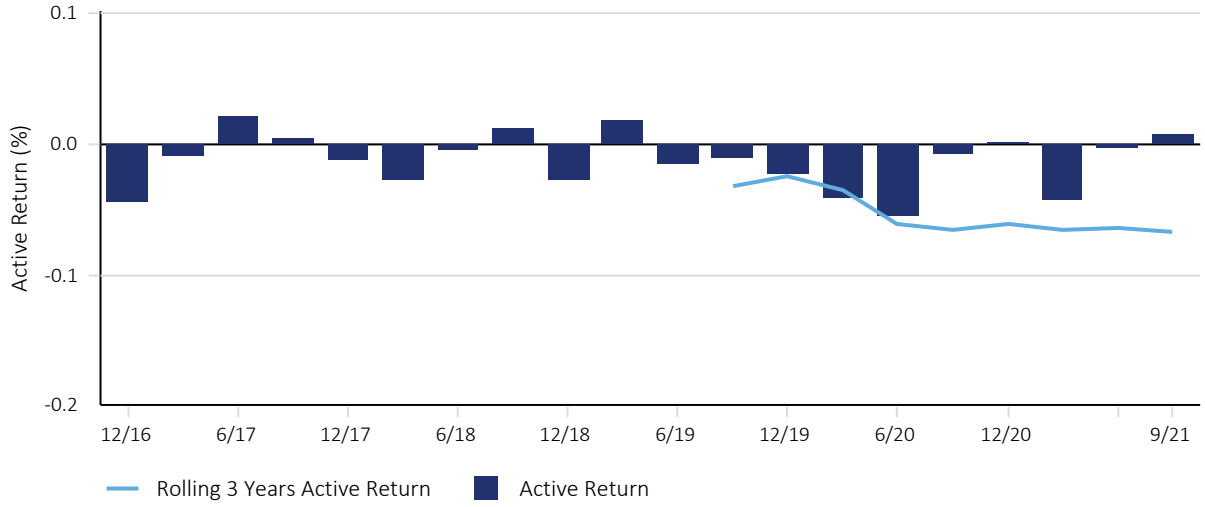


	Quarter	Year To Date	1 Year	3 Years	5 Years	10 Years
Fund	0.06 (65)	-1.60 (85)	-0.94 (88)	5.29 (94)	2.89 (95)	2.99 (96)
Benchmark	0.05 (68)	-1.56 (79)	-0.90 (86)	5.35 (92)	2.94 (92)	3.01 (94)
Median	0.10	-1.15	0.00	6.05	3.59	3.66

Comparative Performance



Rolling 3 Years Performance

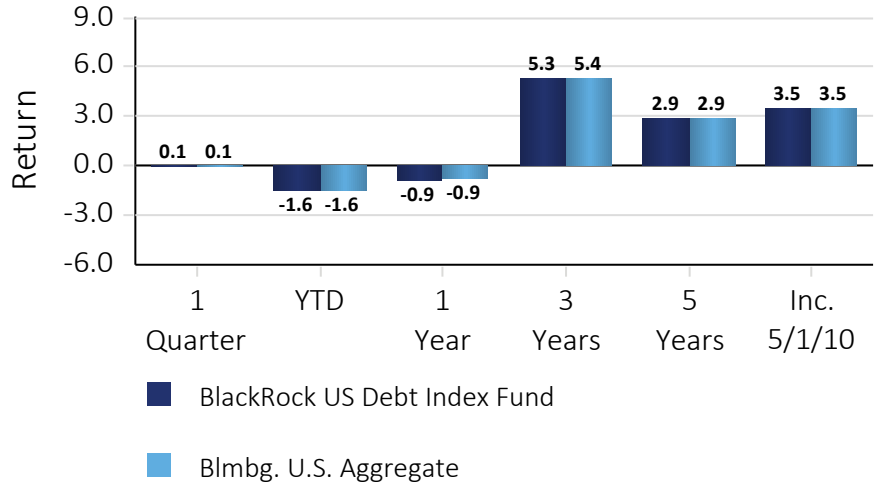


Manager Summary

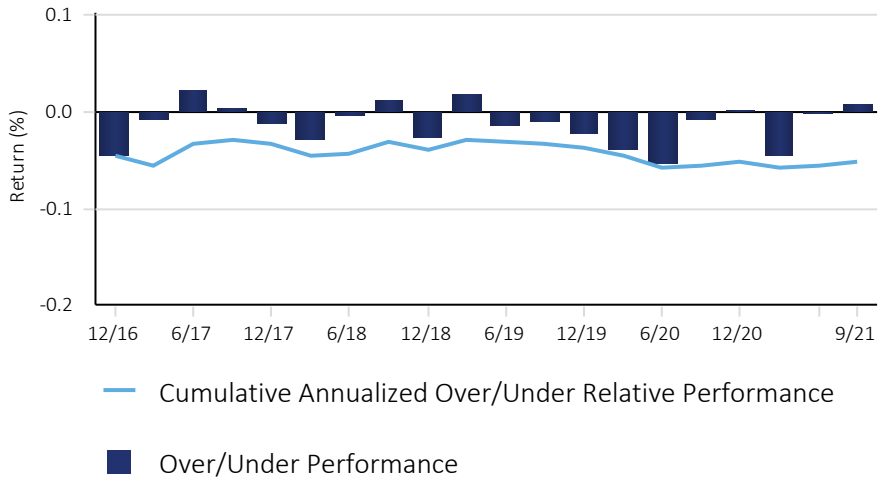
BlackRock US Debt Index Fund vs IM U.S. Broad Market Core Fixed Income (SA+CF)

Periods Ended September 30, 2021

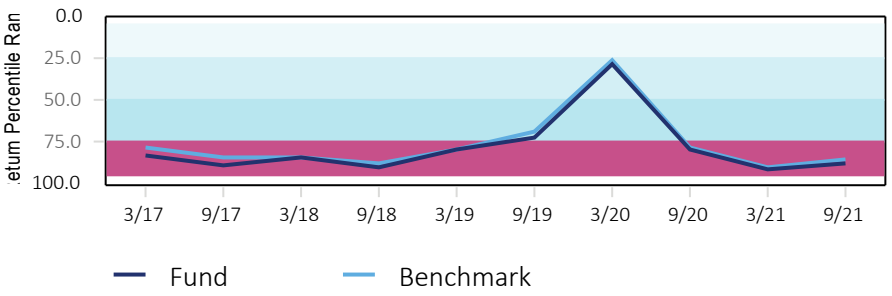
Comparative Performance



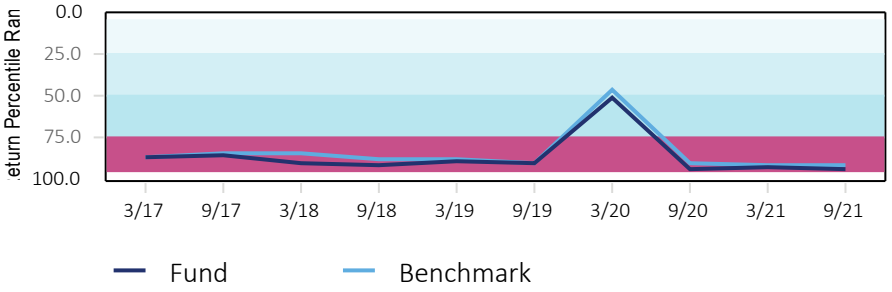
Relative Performance



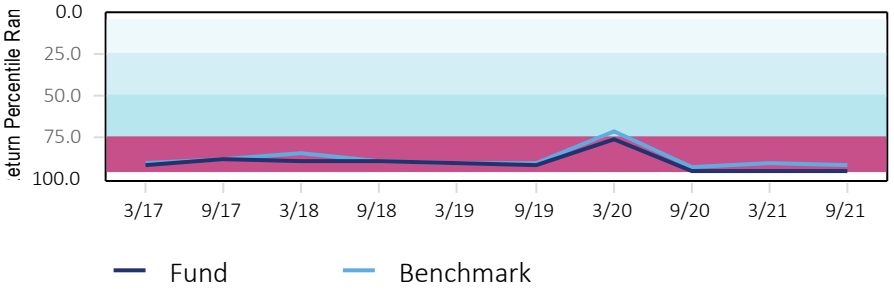
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking



Portfolio Characteristics

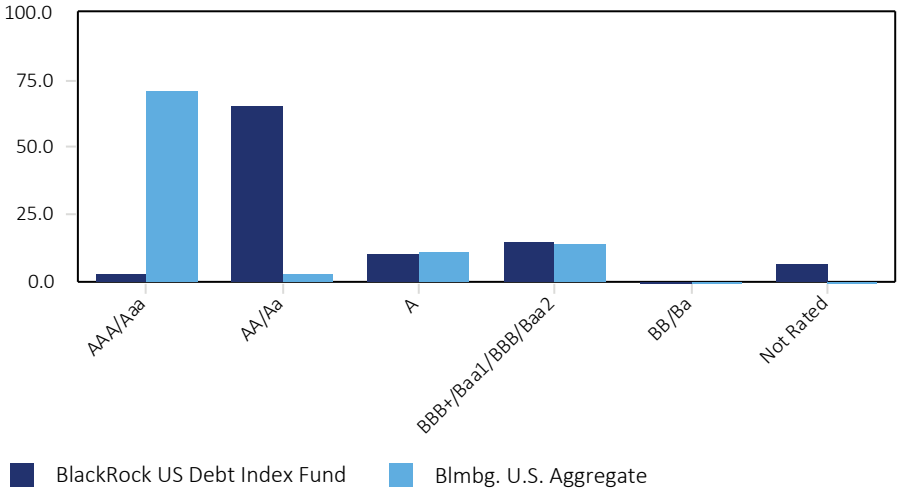
BlackRock US Debt Index Fund vs Blmbg. U.S. Aggregate

Periods Ended As of September 30, 2021

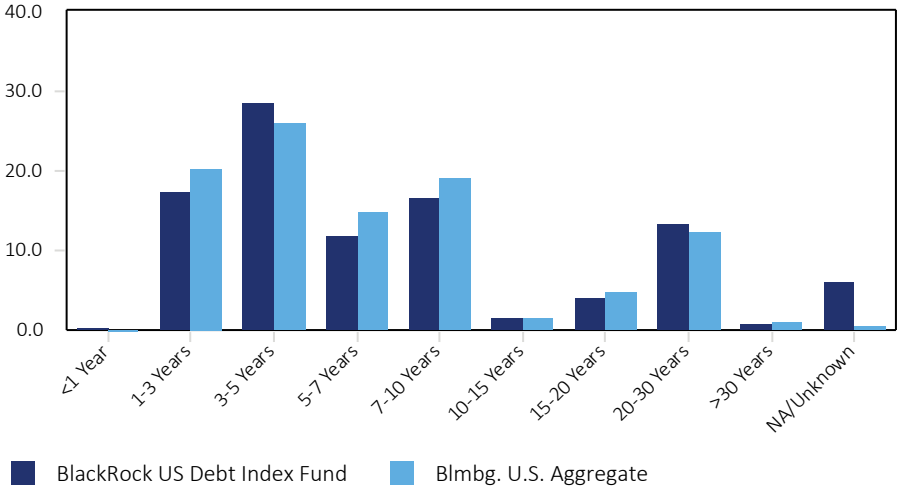
Portfolio Characteristics

	Portfolio	Benchmark
Avg. Maturity	8.76	8.54
Avg. Quality	AA	AA
Convexity	0.25	0.15
Coupon Rate (%)	2.87	2.58
Current Yield		1.51
Modified Duration	6.87	6.76
Effective Duration	6.67	6.34
Spread Duration		
Yield To Maturity (%)	1.50	1.51
Yield To Worst	1.50	1.50
Market To Book Value		
Crediting Rate		
Crediting to Underlying Ratio		
Underlying Yield		

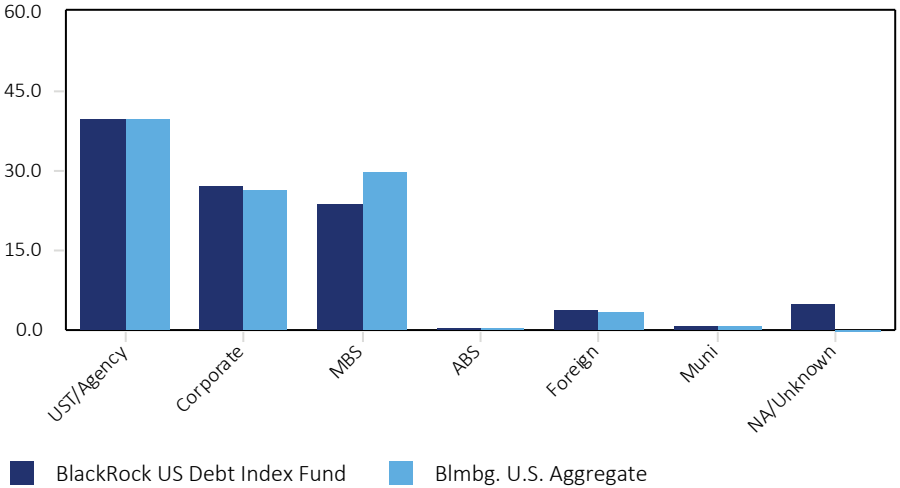
Credit Quality Distribution (%)



Maturity Distribution (%)



Sector Distribution (%)

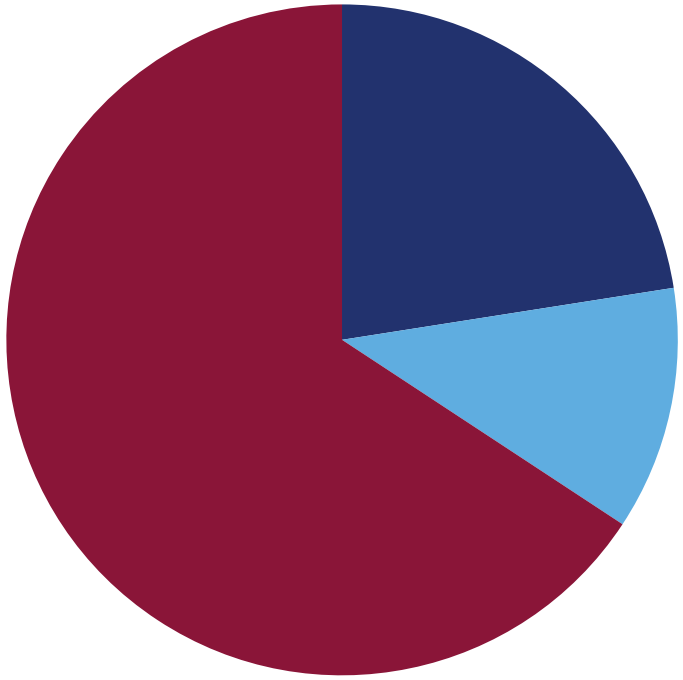


Asset Allocation By Manager

High Yield Composite

Periods Ended September 30, 2021

Sep-2021 : 187,538,591

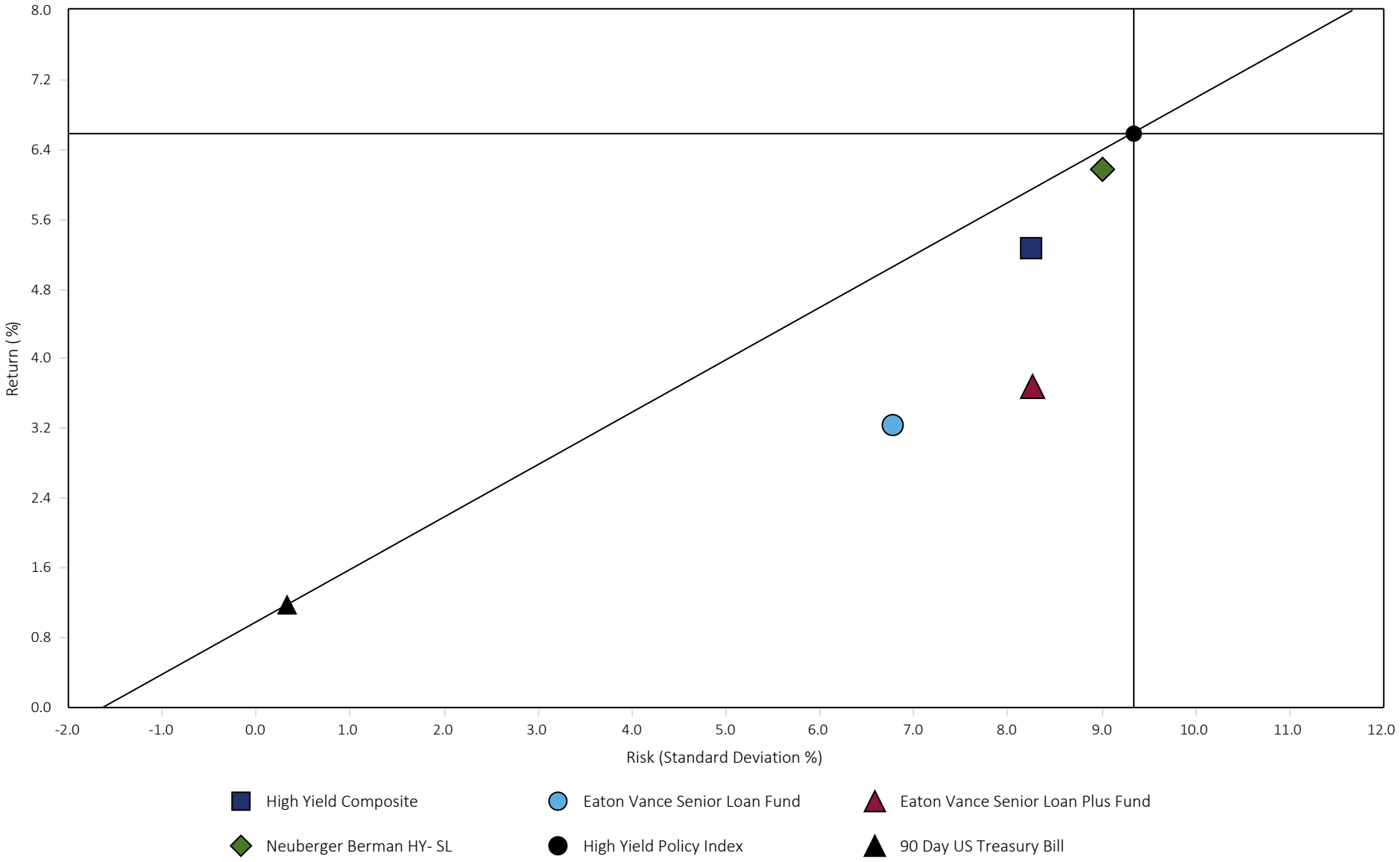


	Market Value $	Allocation (%)
Eaton Vance Senior Loan Fund	42,229,706	22.5
Eaton Vance Senior Loan Plus Fund	22,029,177	11.7
Neuberger Berman HY- SL	123,279,707	65.7

Risk vs. Return

High Yield Composite

Periods Ended 3 Years Ending September 30, 2021



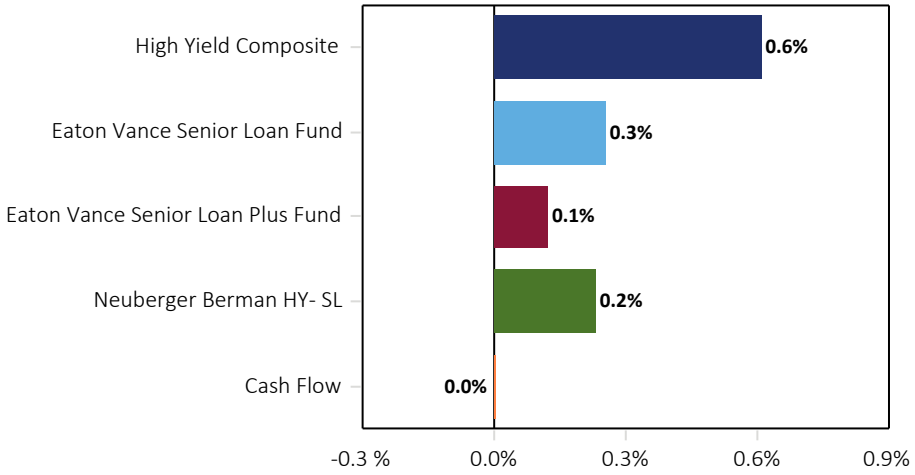
Calculation based on monthly periodicity.

Return and Risk Contribution

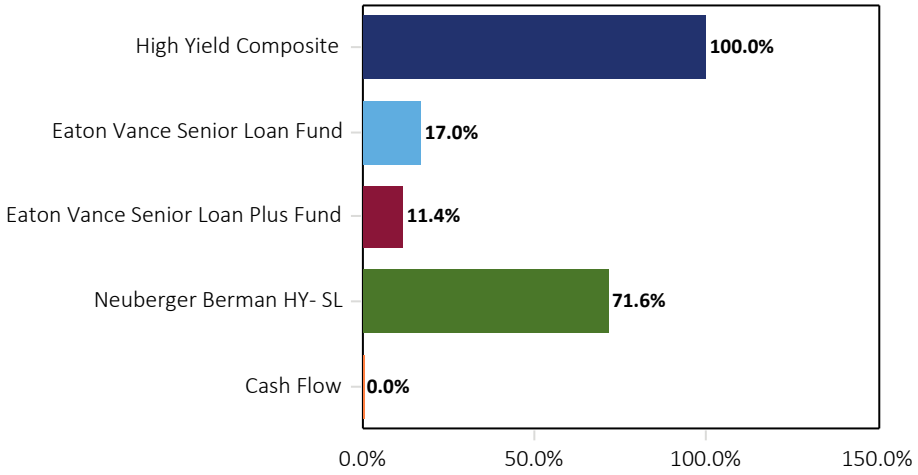
High Yield Composite

Periods Ended 1 Quarter September 30, 2021

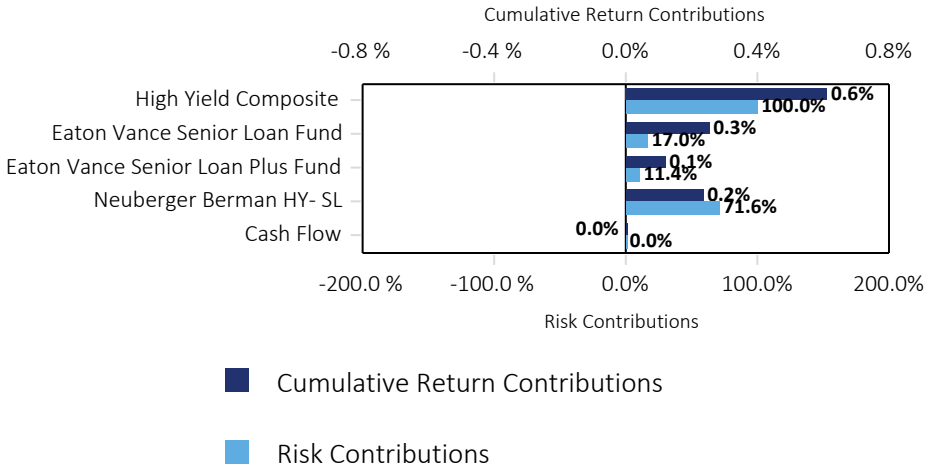
Cumulative Return Contributions



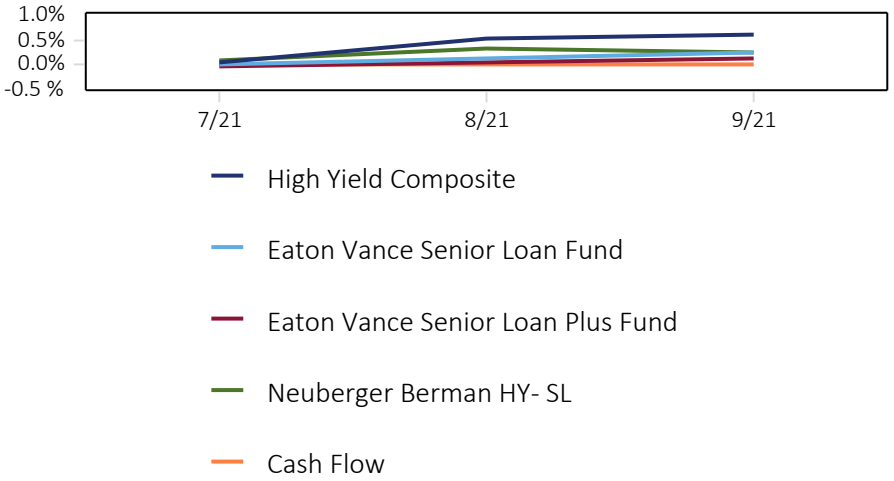
Risk Contributions



Cumulative Return and Risk Contributions



Cumulative Return Contributions History

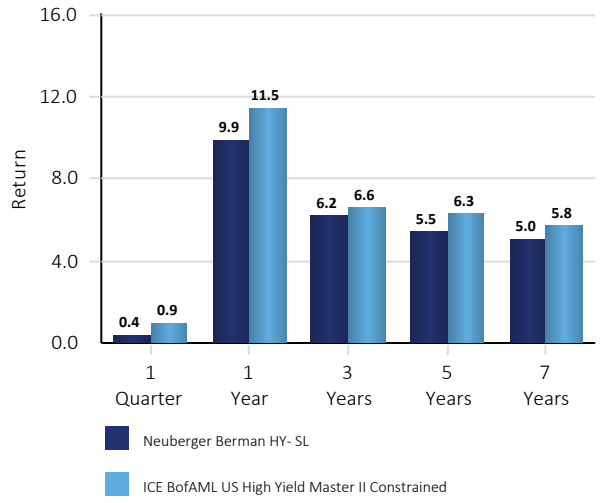


Performance Summary

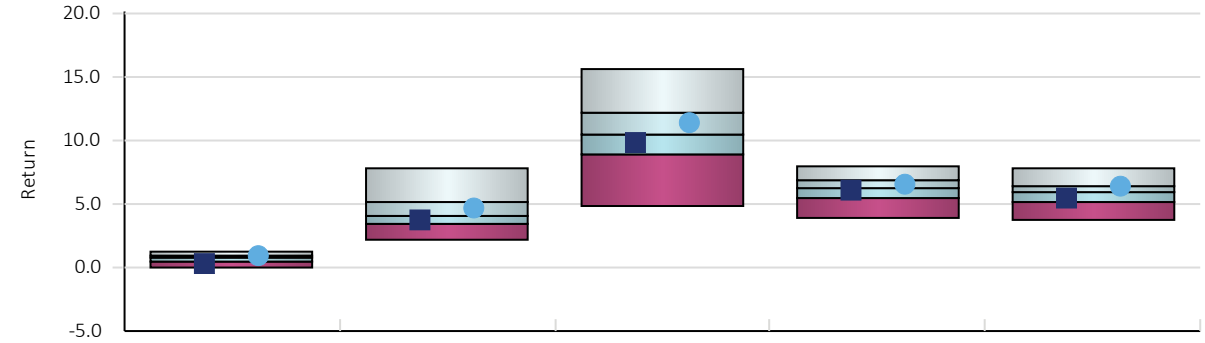
Neuberger Berman HY- SL

Periods Ended September 30, 2021

Comparative Performance

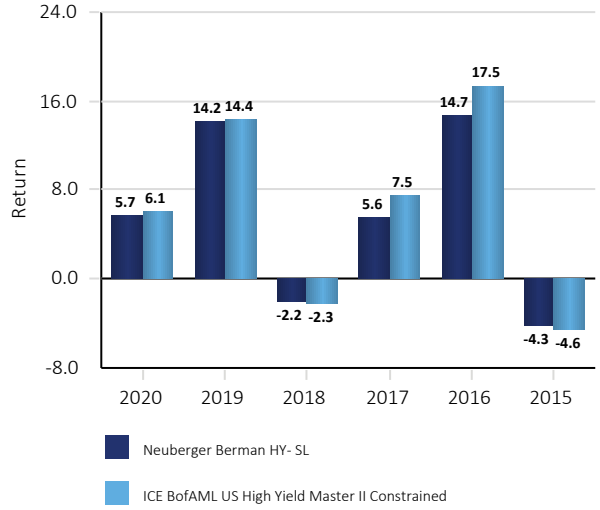


Peer Group Analysis: IM U.S. High Yield Bonds (SA+CF)

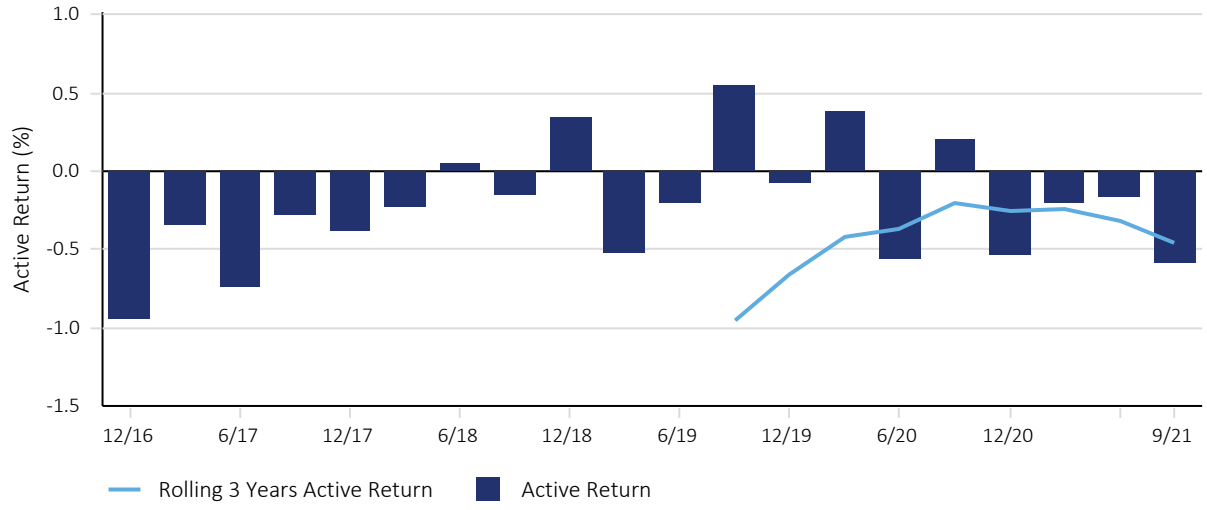


	Quarter	Year To Date	1 Year	3 Years	5 Years
Fund	0.36 (87)	3.70 (63)	9.86 (60)	6.17 (56)	5.45 (70)
Benchmark	0.95 (16)	4.68 (36)	11.46 (36)	6.59 (36)	6.34 (29)
Median	0.73	4.13	10.41	6.31	5.88

Comparative Performance



Rolling 3 Years Performance

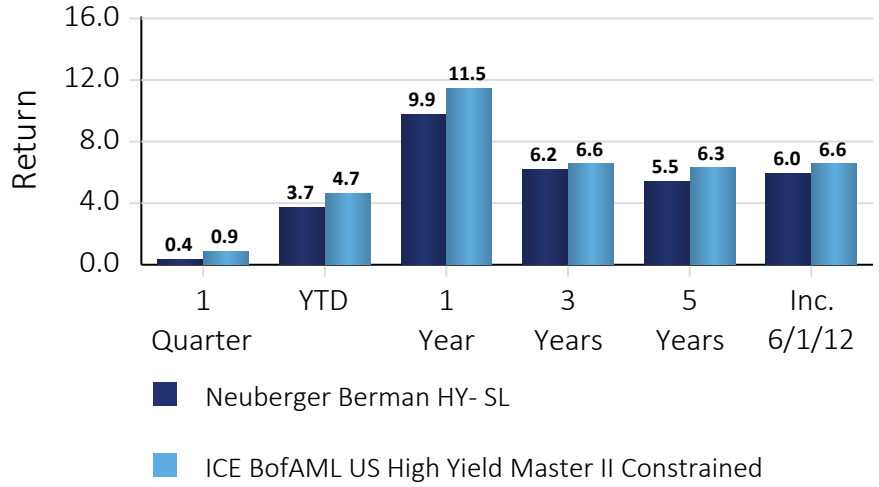


Manager Summary

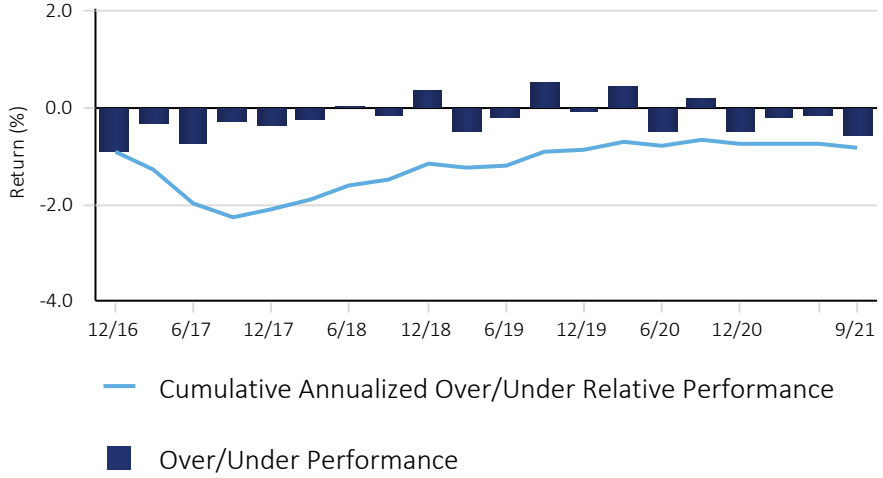
Neuberger Berman HY- SL vs IM U.S. High Yield Bonds (SA+CF)

Periods Ended September 30, 2021

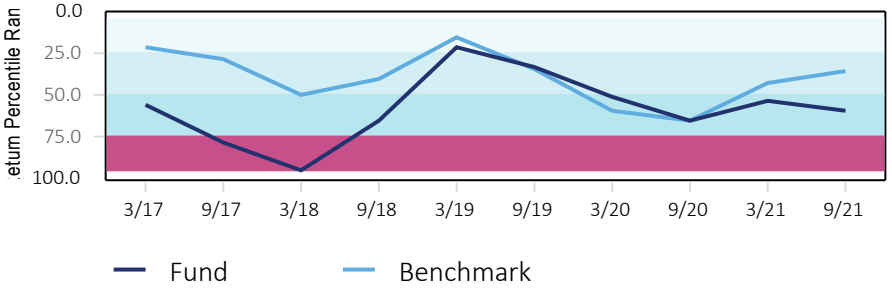
Comparative Performance



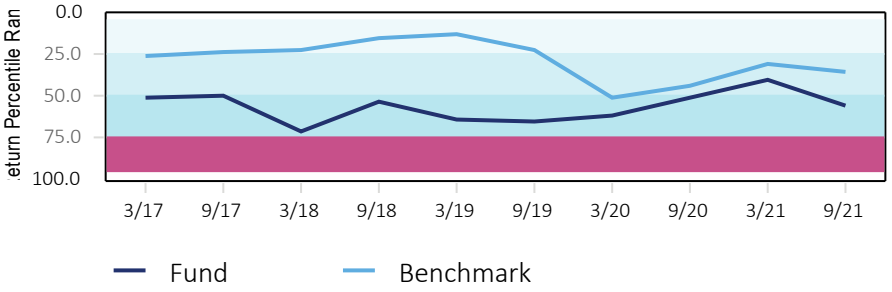
Relative Performance



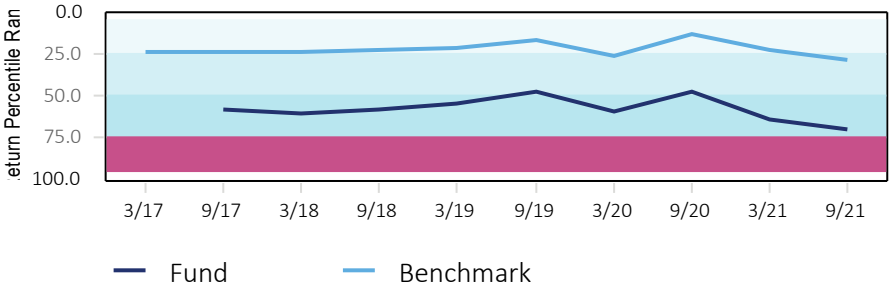
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking



Portfolio Characteristics

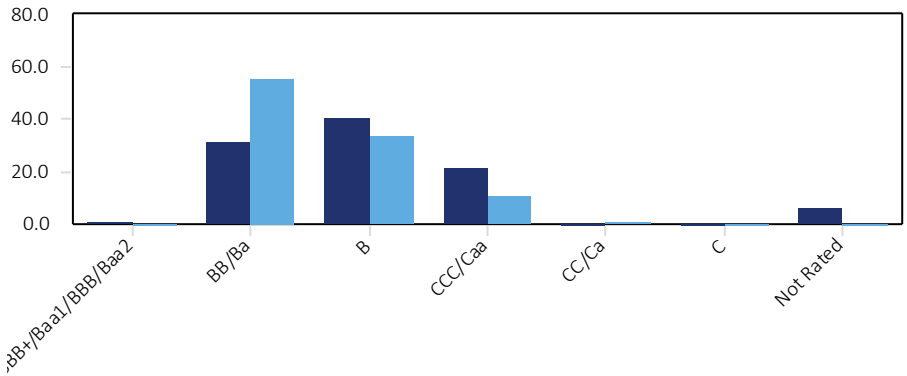
Neuberger Berman HY- SL vs ICE BofAML US High Yield Master II Constrained

Periods Ended As of September 30, 2021

Portfolio Characteristics

	Portfolio	Benchmark
Avg. Maturity	6.82	6.60
Avg. Quality	B	B
Convexity	-0.31	-0.15
Coupon Rate (%)	5.74	5.75
Current Yield		4.60
Modified Duration	5.49	5.25
Effective Duration	4.31	5.25
Spread Duration		
Yield To Maturity (%)	5.15	4.60
Yield To Worst	4.69	4.05
Market To Book Value		
Crediting Rate		
Crediting to Underlying Ratio		
Underlying Yield		

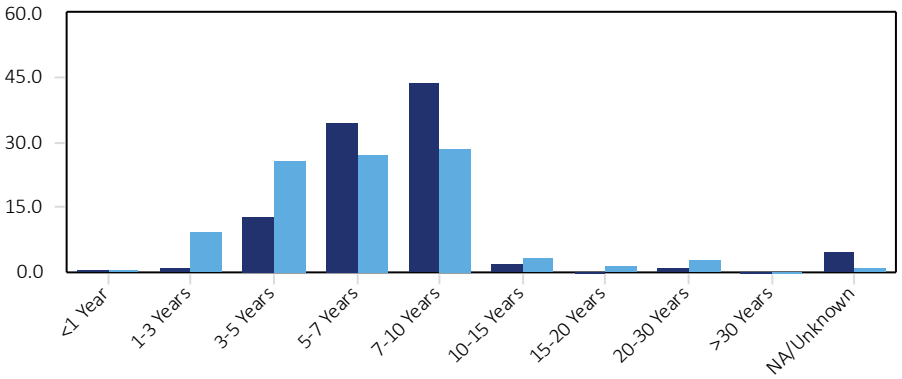
Credit Quality Distribution (%)



Neuberger Berman HY- SL

ICE BofAML US High Yield Master II Constrained

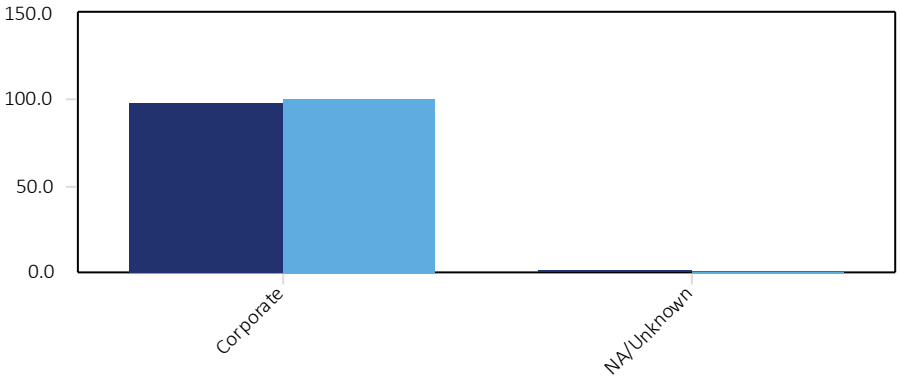
Maturity Distribution (%)



Neuberger Berman HY- SL

ICE BofAML US High Yield Master II Constrained

Sector Distribution (%)



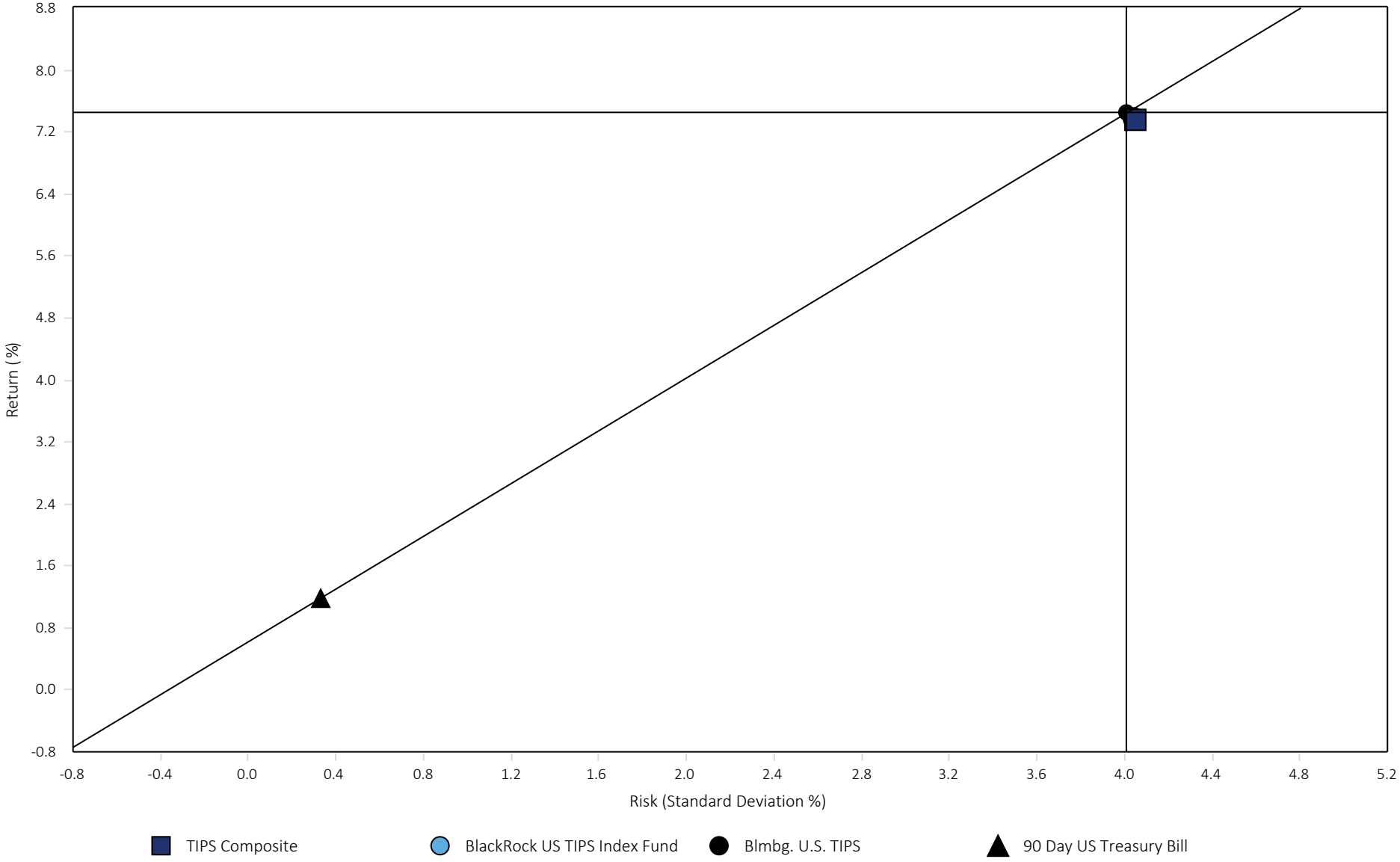
Neuberger Berman HY- SL

ICE BofAML US High Yield Master II Constrained

Risk vs. Return

TIPS Composite

Periods Ended 3 Years Ending September 30, 2021



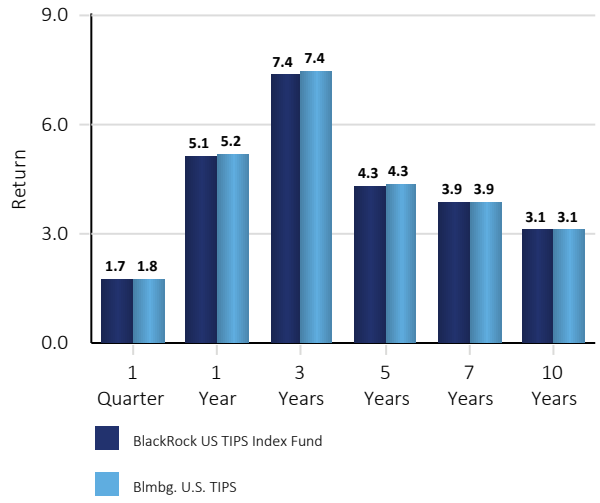
Calculation based on monthly periodicity.

Performance Summary

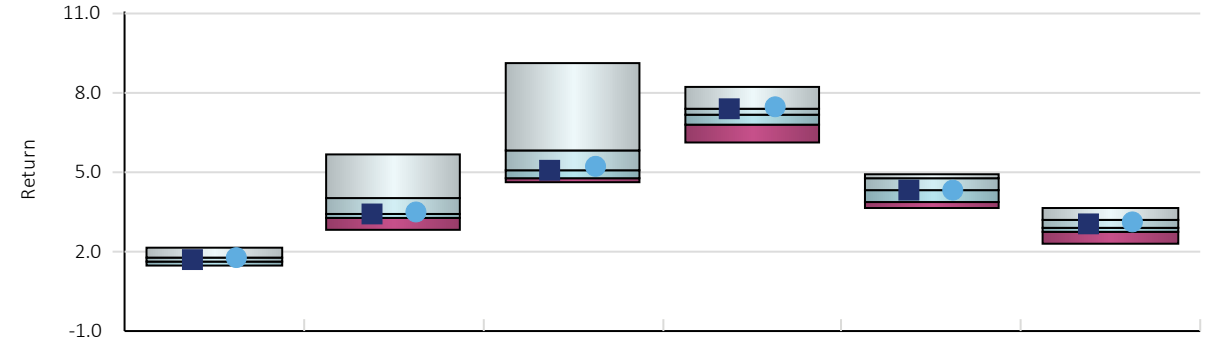
BlackRock US TIPS Index Fund

Periods Ended September 30, 2021

Comparative Performance

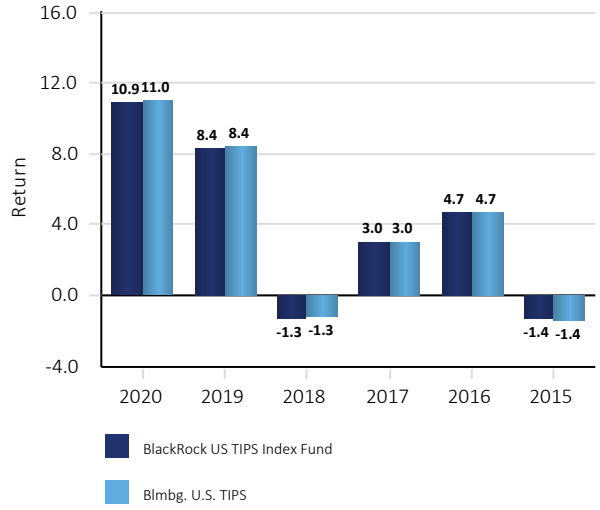


Peer Group Analysis: IM U.S. TIPS (SA+CF)

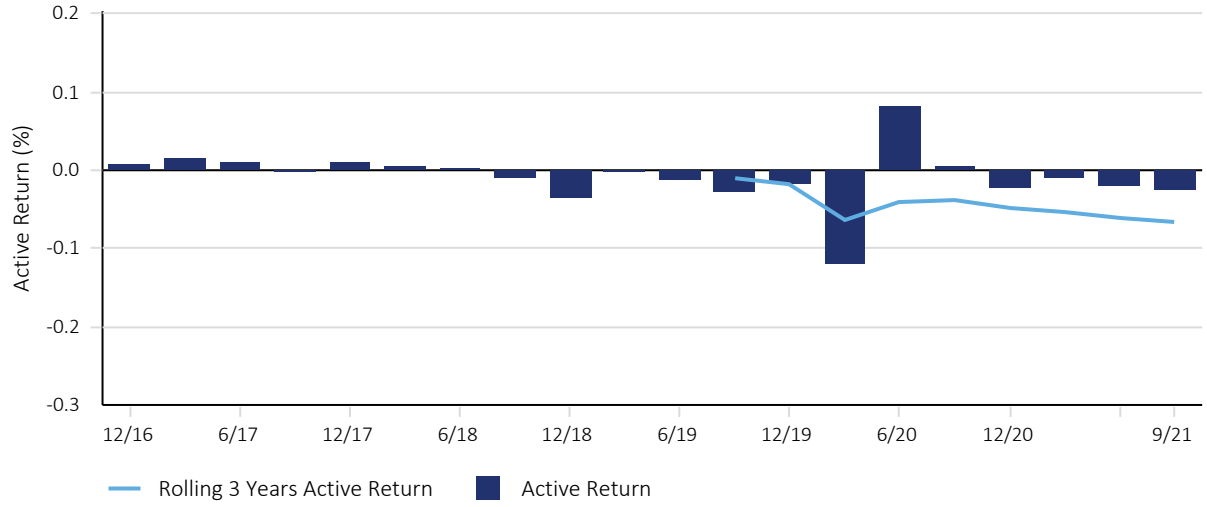


	Quarter	Year To Date	1 Year	3 Years	5 Years	10 Years
Fund	1.73 (28)	3.46 (46)	5.11 (49)	7.38 (31)	4.30 (46)	3.08 (42)
Benchmark	1.75 (27)	3.51 (40)	5.19 (47)	7.45 (23)	4.34 (38)	3.12 (32)
Median	1.62	3.40	5.07	7.19	4.30	2.93

Comparative Performance



Rolling 3 Years Performance

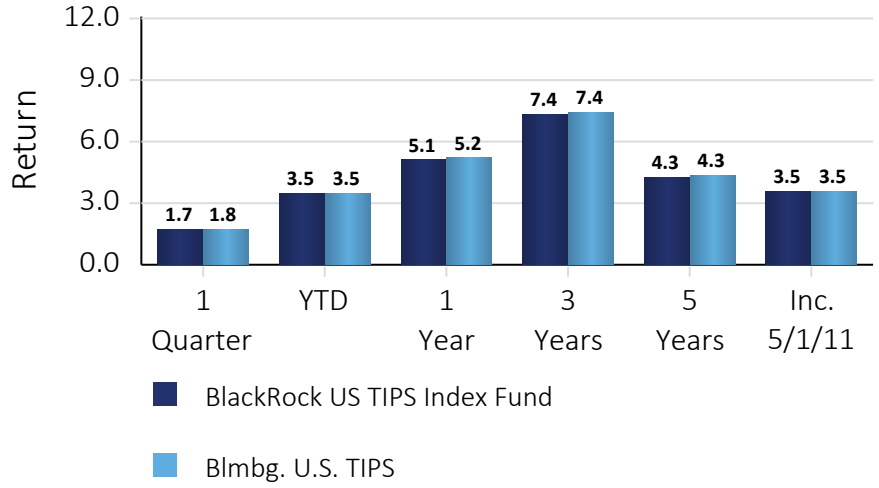


Manager Summary

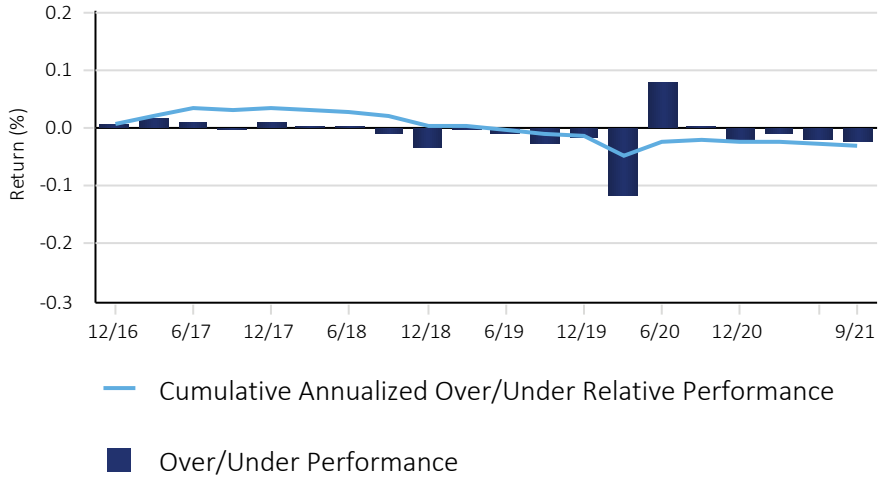
BlackRock US TIPS Index Fund vs IM U.S. TIPS (SA+CF)

Periods Ended September 30, 2021

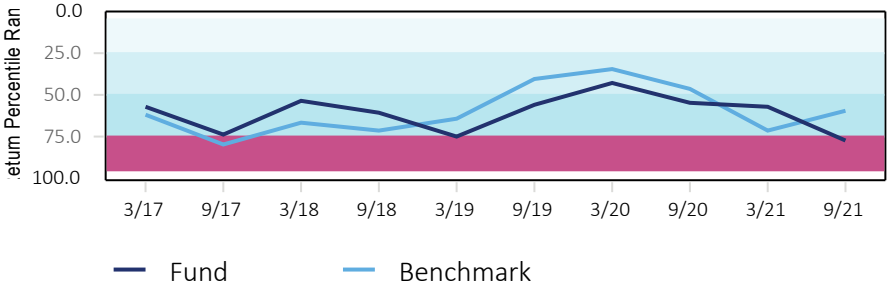
Comparative Performance



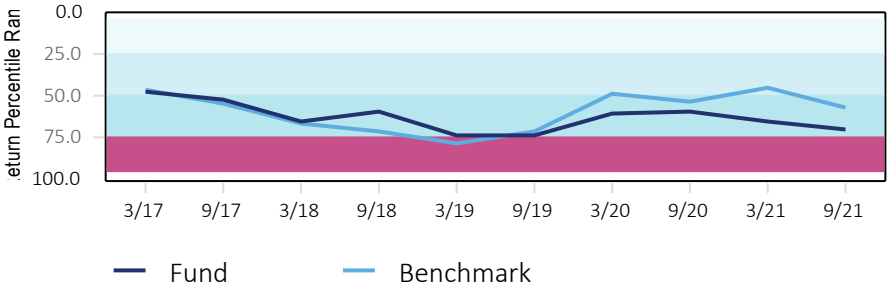
Relative Performance



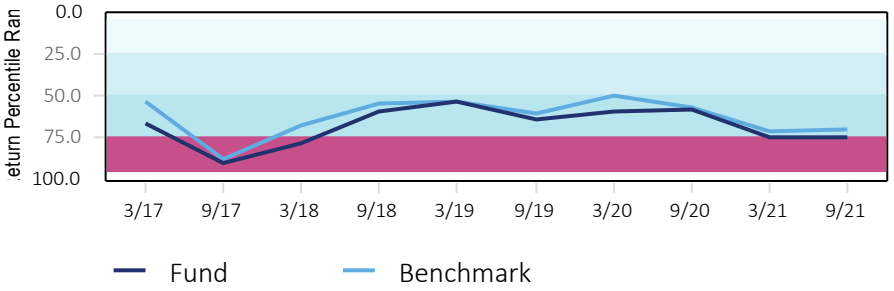
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking



Portfolio Characteristics

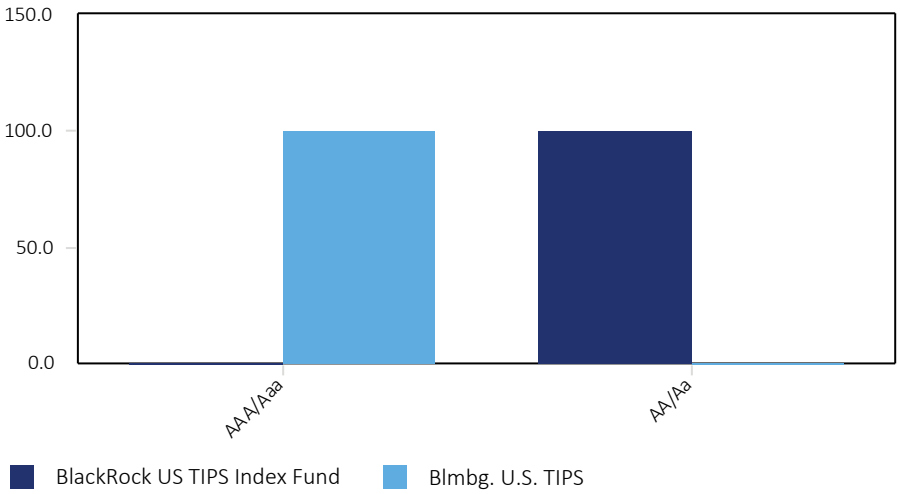
BlackRock US TIPS Index Fund vs Blmbg. U.S. TIPS

Periods Ended As of September 30, 2021

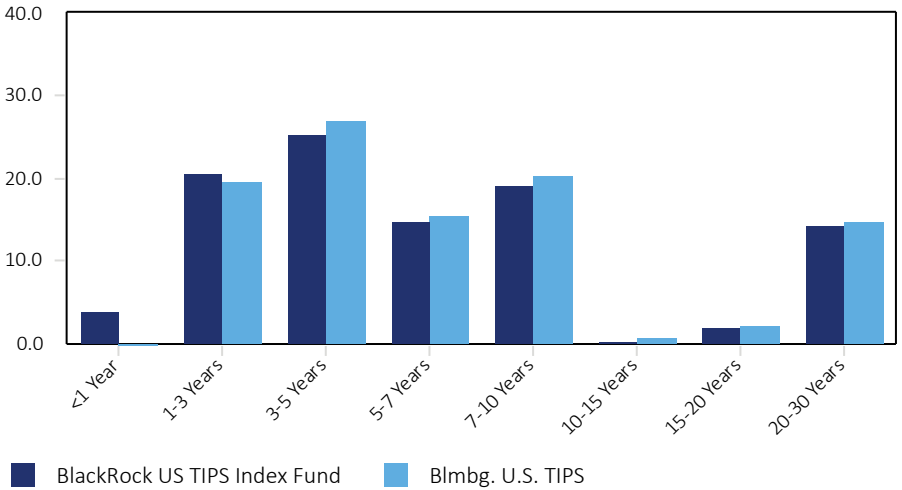
Portfolio Characteristics

	Portfolio	Benchmark
Avg. Maturity	7.84	8.21
Avg. Quality	AA	AAA
Convexity	0.15	0.15
Coupon Rate (%)	0.71	0.73
Current Yield		1.08
Modified Duration	7.35	7.71
Effective Duration	3.55	7.71
Spread Duration		
Yield To Maturity (%)	1.03	1.08
Yield To Worst	1.03	1.08
Market To Book Value		
Crediting Rate		
Crediting to Underlying Ratio		
Underlying Yield		

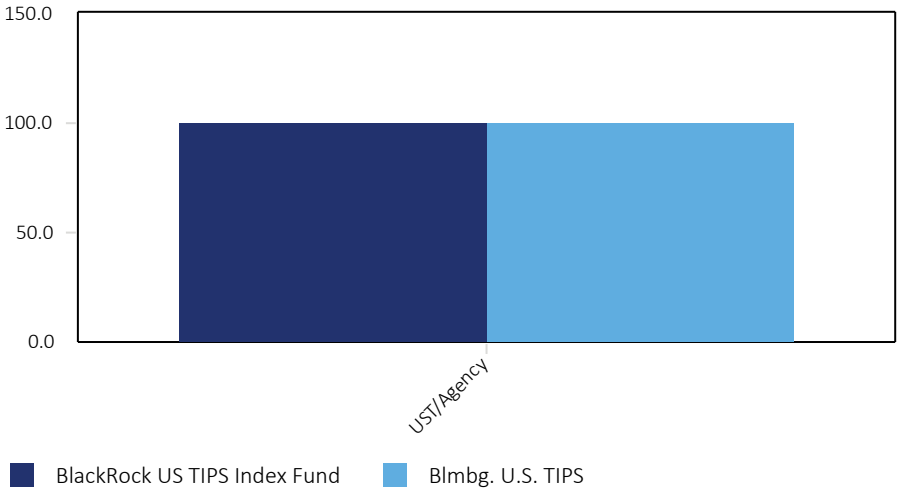
Credit Quality Distribution (%)



Maturity Distribution (%)



Sector Distribution (%)

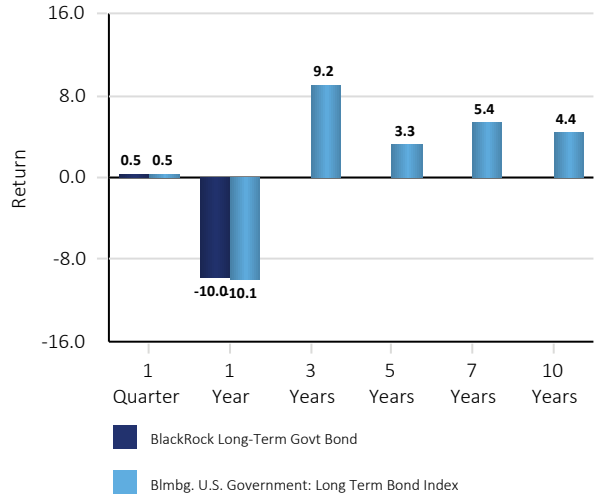


Performance Summary

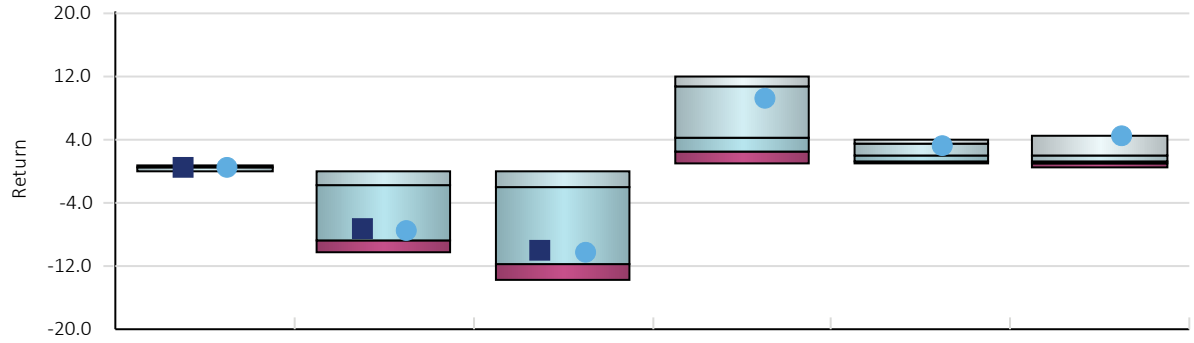
BlackRock Long-Term Govt Bond

Periods Ended September 30, 2021

Comparative Performance

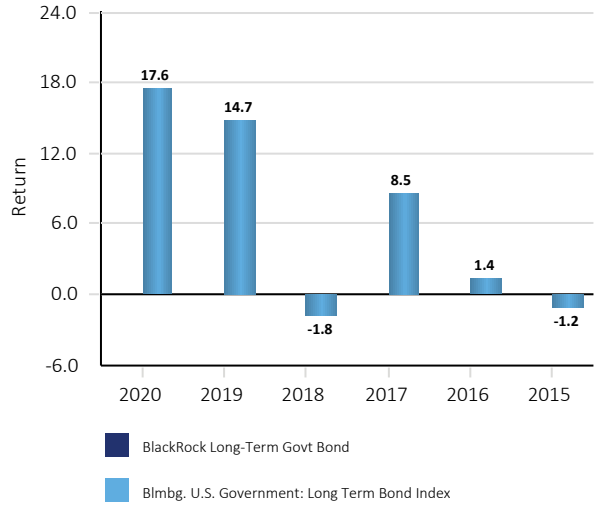


Peer Group Analysis: IM U.S. Government Bonds (SA+CF)

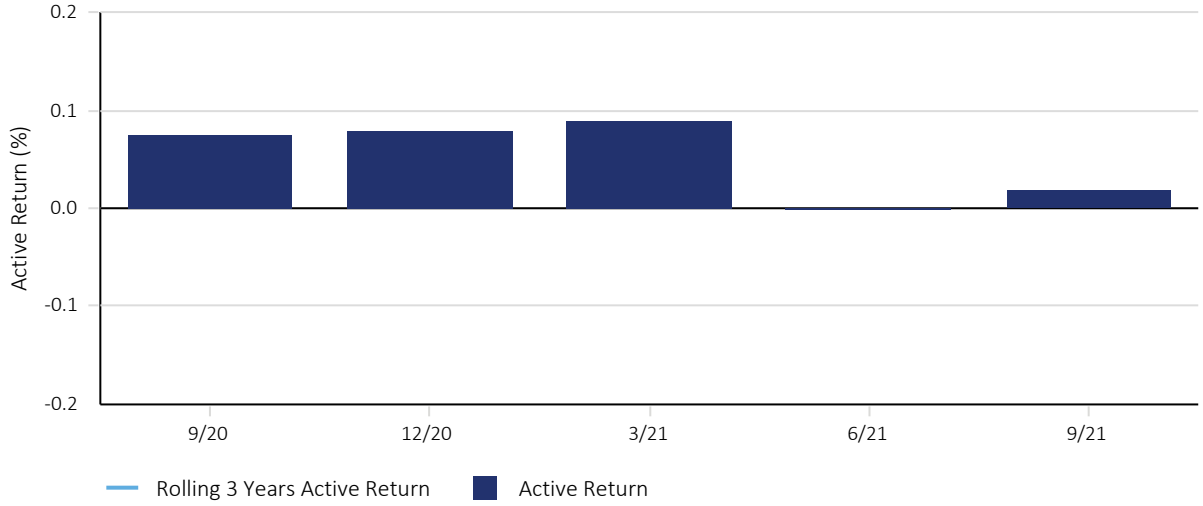


	Quarter	Year To Date	1 Year	3 Years	5 Years	10 Years
Fund	0.48 (24)	-7.29 (68)	-9.95 (68)			
Benchmark	0.46 (25)	-7.40 (69)	-10.13 (69)	9.17 (33)	3.34 (27)	4.40 (8)
Median	0.06	-1.68	-1.97	4.32	1.89	1.37

Comparative Performance



Rolling 3 Years Performance



Portfolio Characteristics

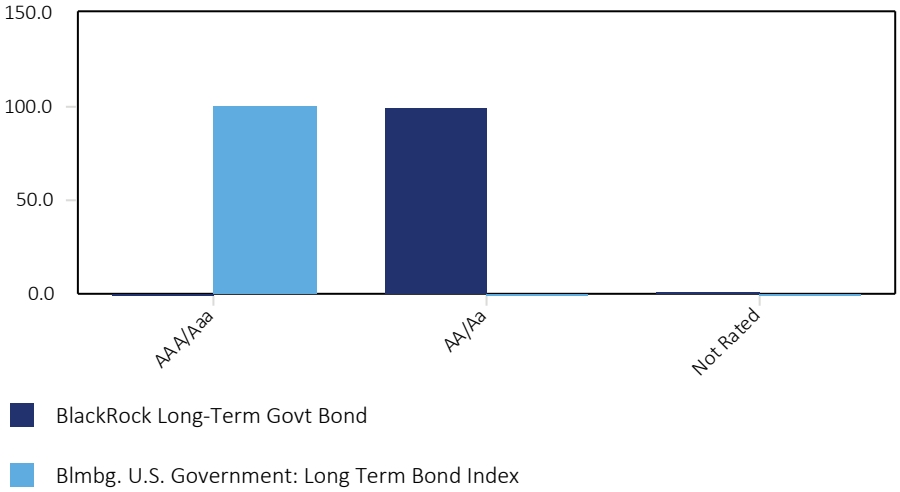
BlackRock Long-Term Govt Bond vs Blmbg. U.S. Government: Long Term Bond Index

Periods Ended As of September 30, 2021

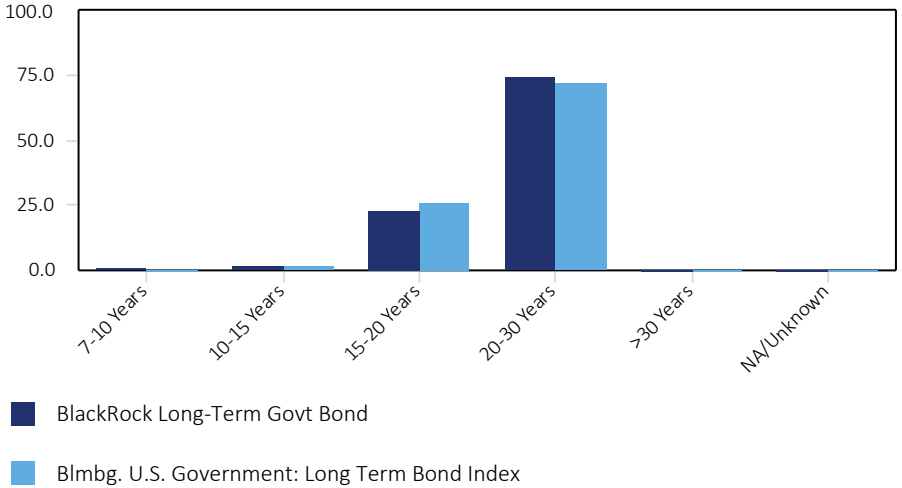
Portfolio Characteristics

	Portfolio	Benchmark
Avg. Maturity	24.21	24.00
Avg. Quality	AA	AAA
Convexity	2.15	2.15
Coupon Rate (%)	2.73	2.70
Current Yield		2.04
Modified Duration	18.01	18.04
Effective Duration	18.74	18.04
Spread Duration		
Yield To Maturity (%)	2.05	2.04
Yield To Worst	2.05	2.05
Market To Book Value		
Crediting Rate		
Crediting to Underlying Ratio		
Underlying Yield		

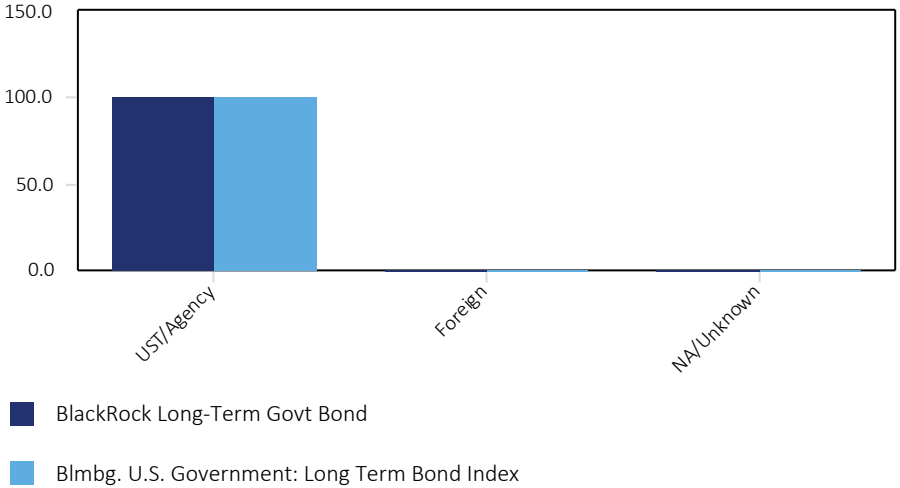
Credit Quality Distribution (%)



Maturity Distribution (%)



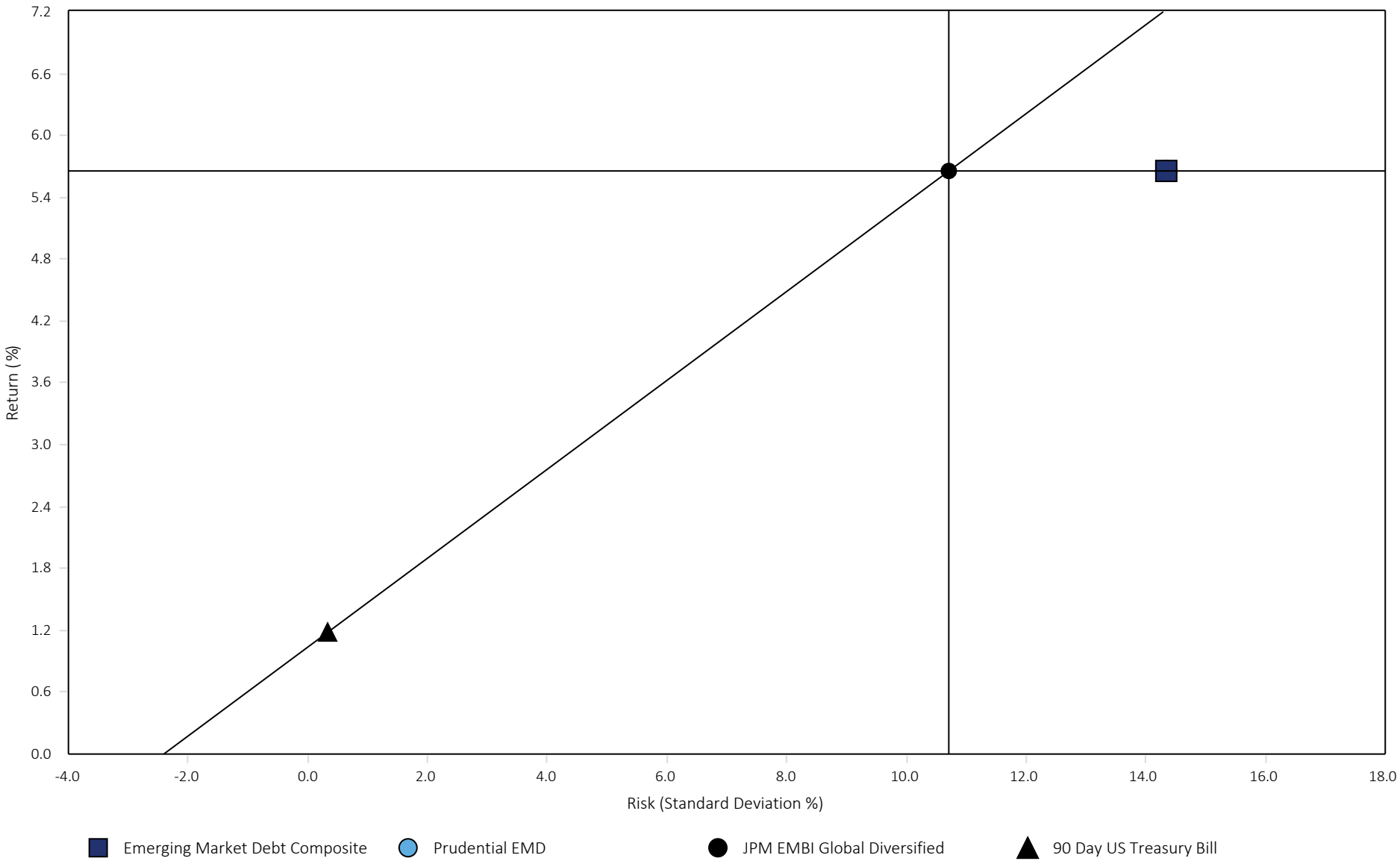
Sector Distribution (%)



Risk vs. Return

Emerging Market Debt Composite

Periods Ended 3 Years Ending September 30, 2021



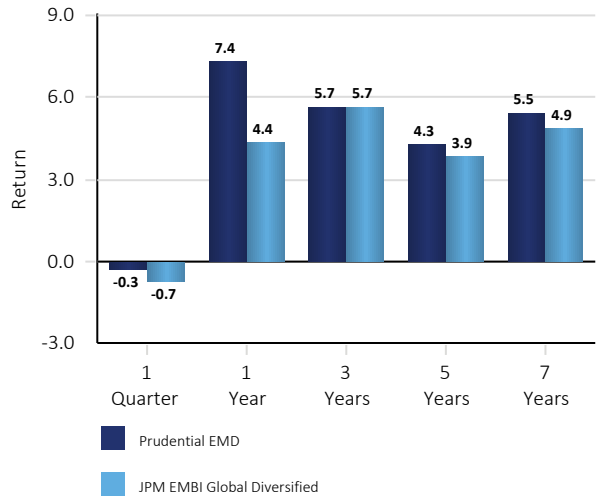
Calculation based on monthly periodicity.

Performance Summary

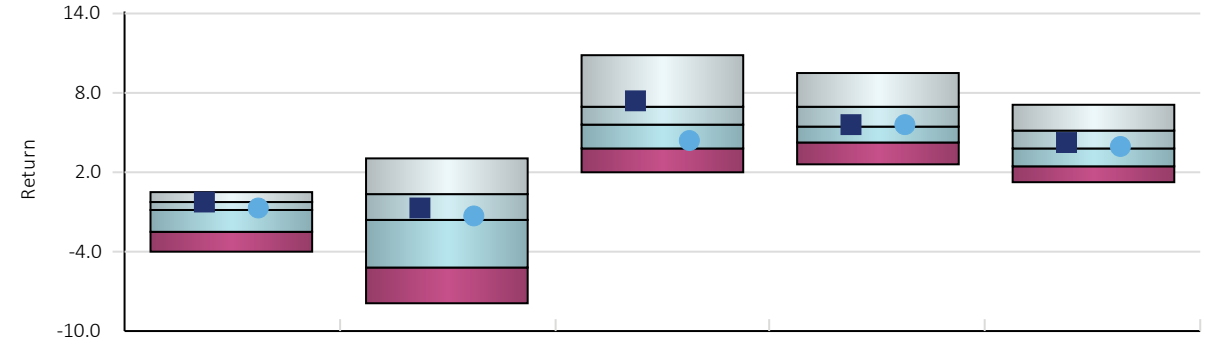
Prudential EMD

Periods Ended September 30, 2021

Comparative Performance

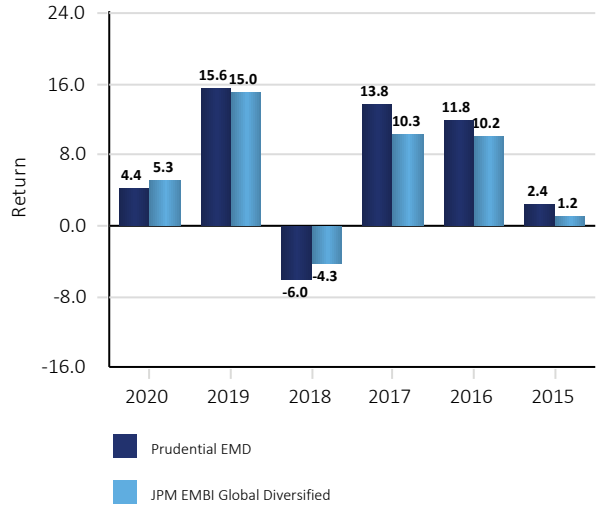


Peer Group Analysis: IM Emerging Markets Debt (SA+CF)

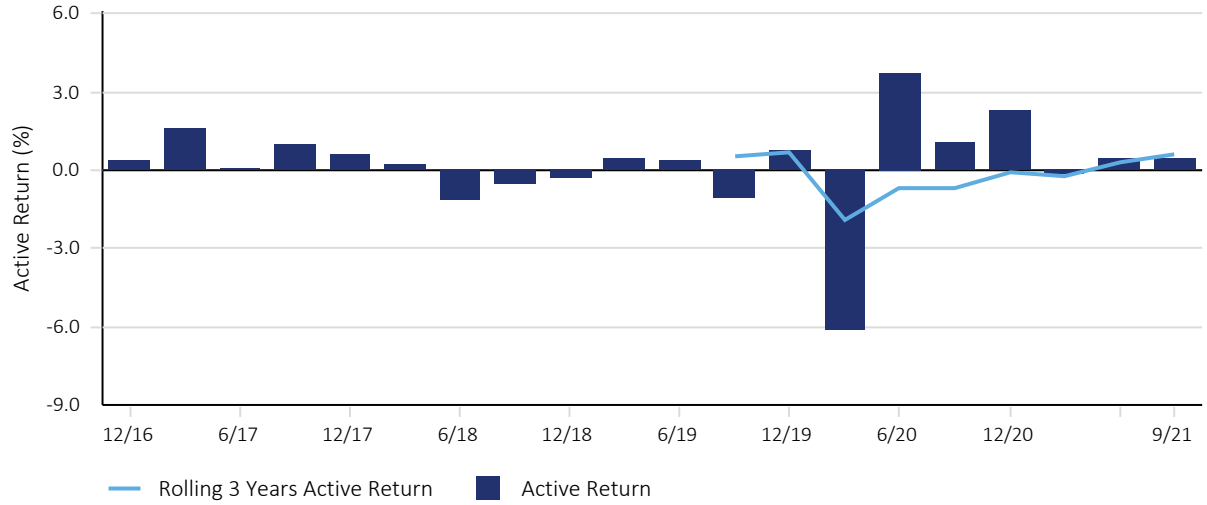


	Quarter	Year To Date	1 Year	3 Years	5 Years
Fund	-0.26 (21)	-0.70 (35)	7.36 (21)	5.66 (45)	4.32 (38)
Benchmark	-0.70 (45)	-1.36 (46)	4.36 (66)	5.65 (45)	3.89 (49)
Median	-0.92	-1.65	5.64	5.46	3.75

Comparative Performance



Rolling 3 Years Performance

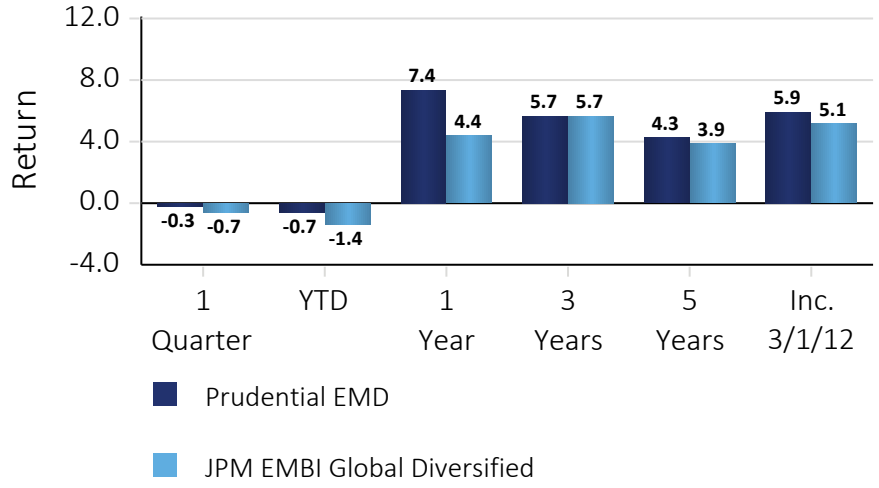


Manager Summary

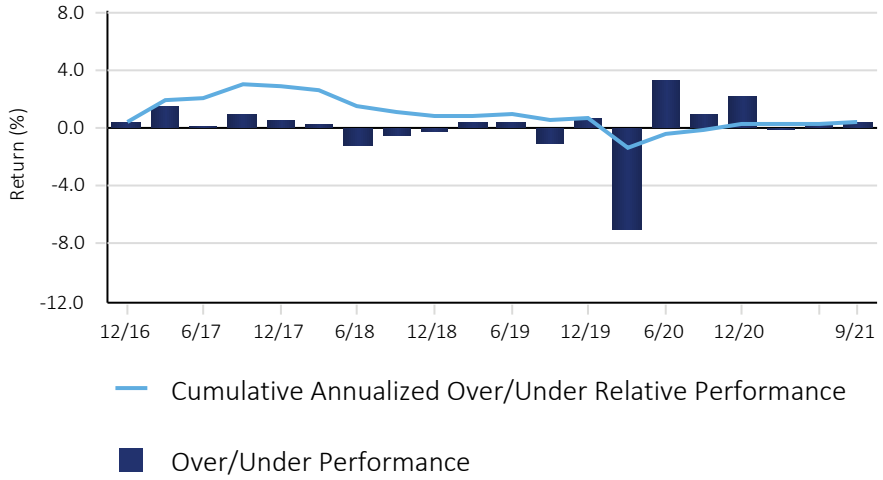
Prudential EMD vs IM Emerging Markets Debt (SA+CF)

Periods Ended September 30, 2021

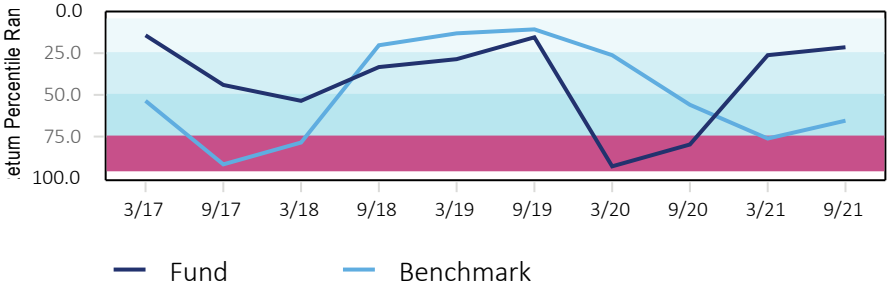
Comparative Performance



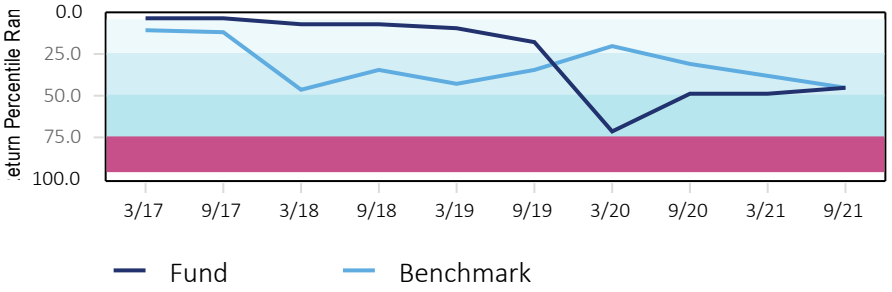
Relative Performance



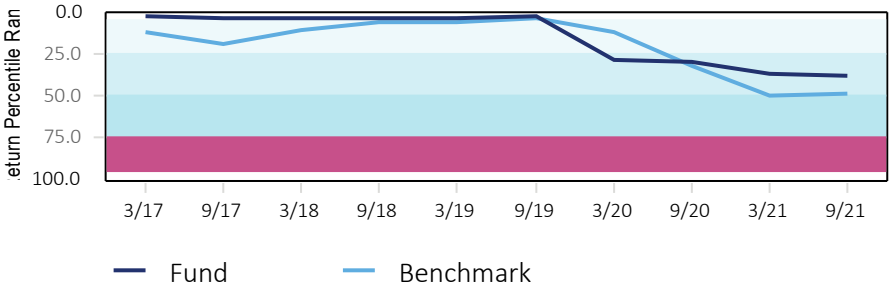
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking

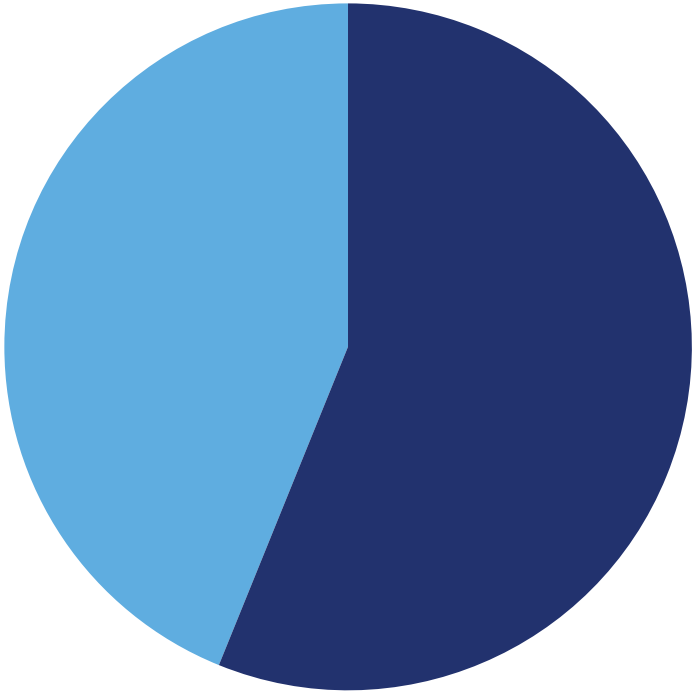


Asset Allocation By Manager

Real Estate Composite

Periods Ended September 30, 2021

Sep-2021 : 197,467,923

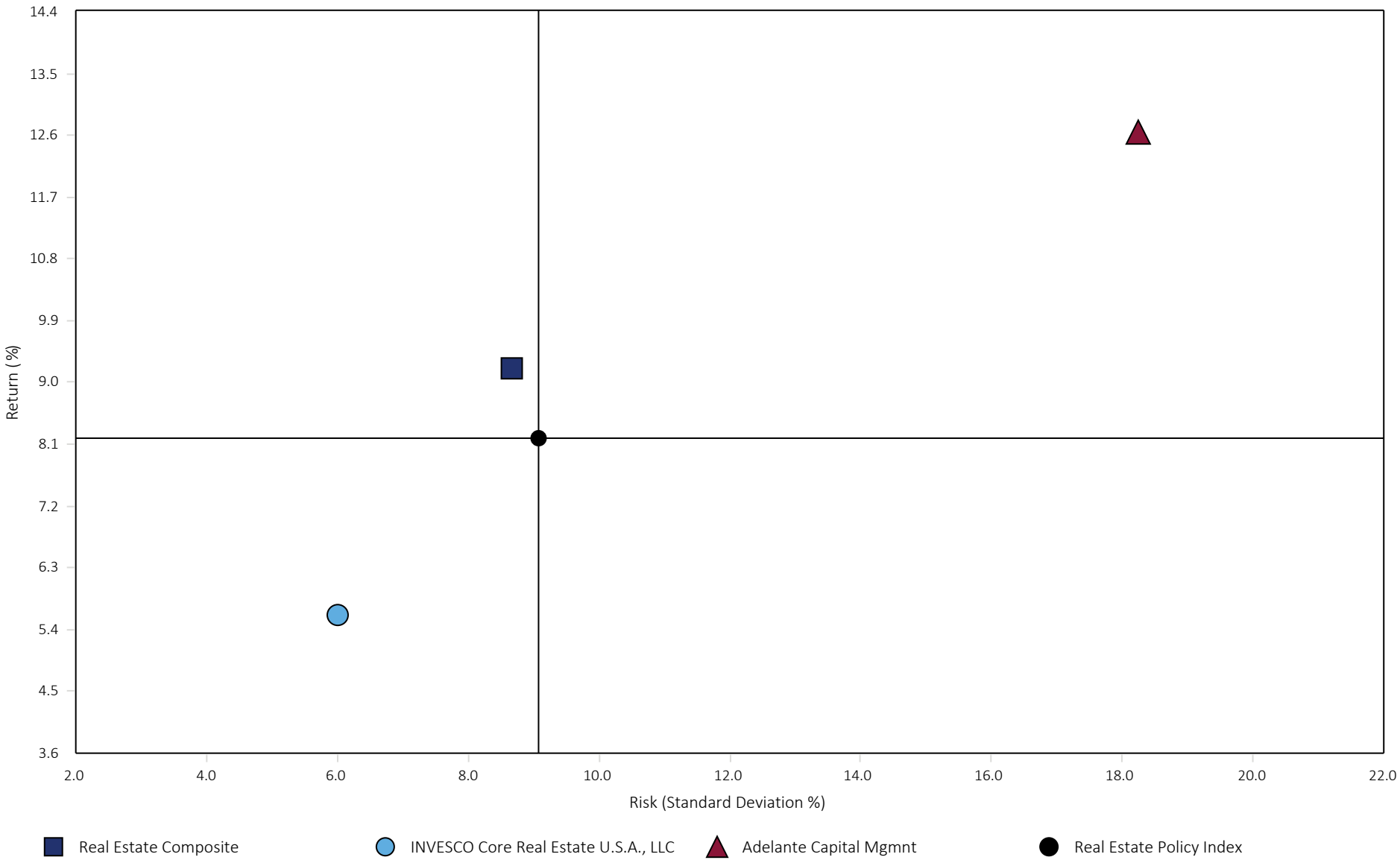


	Market Value $	Allocation (%)
INVESCO Core Real Estate U.S.A., LLC	110,840,089	56.1
Adelante Capital Mgmnt	86,627,834	43.9

Risk vs. Return

Real Estate Composite

Periods Ended 3 Years Ending September 30, 2021



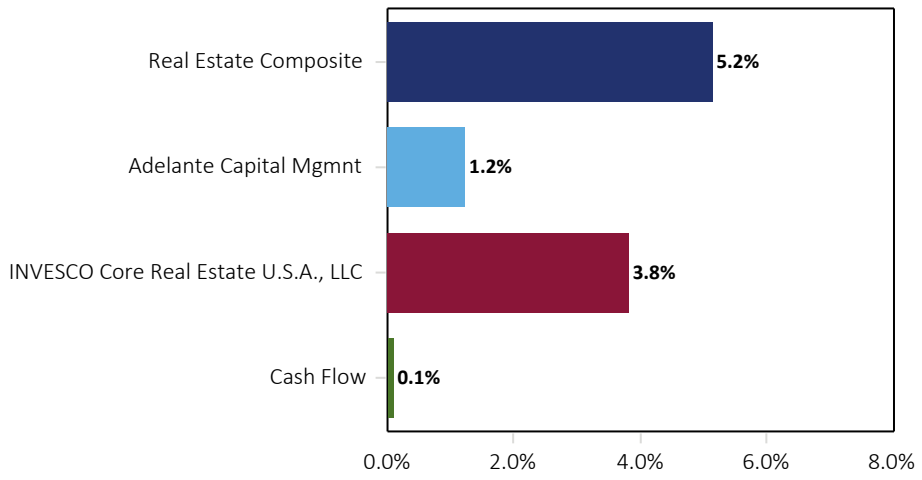
Calculation based on monthly periodicity.

Return and Risk Contribution

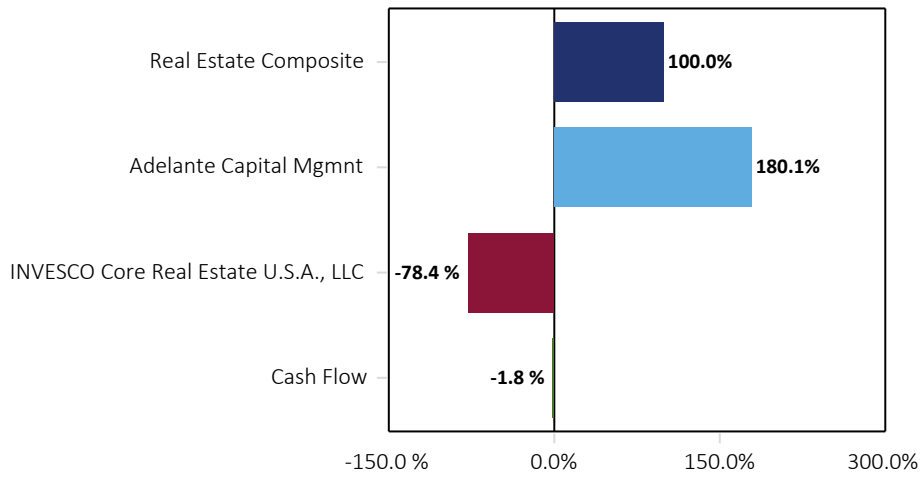
Real Estate Composite

Periods Ended 1 Quarter September 30, 2021

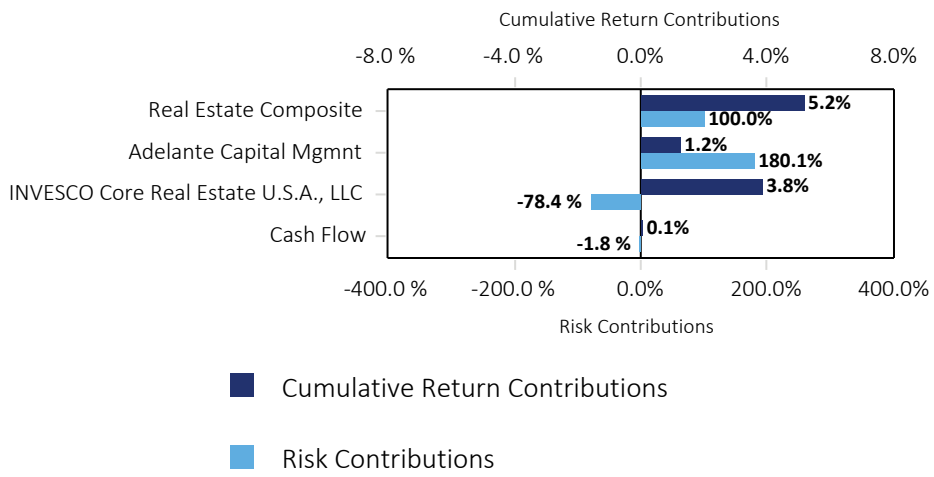
Cumulative Return Contributions



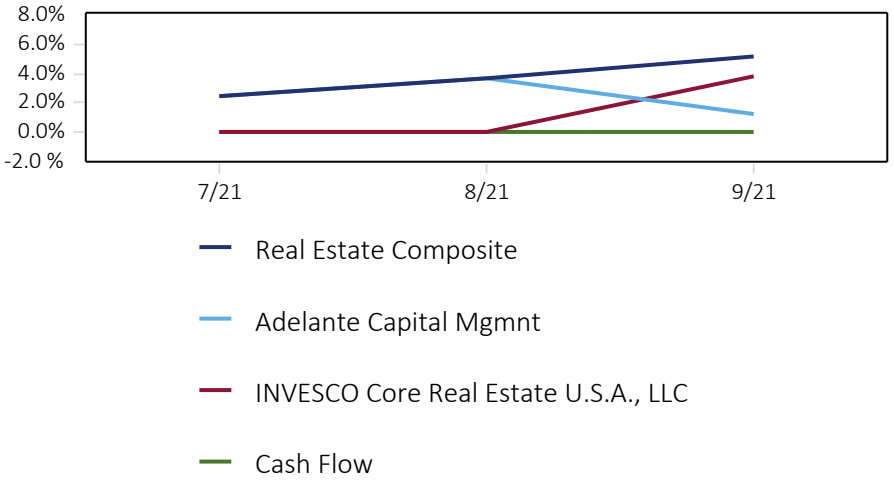
Risk Contributions



Cumulative Return and Risk Contributions



Cumulative Return Contributions History

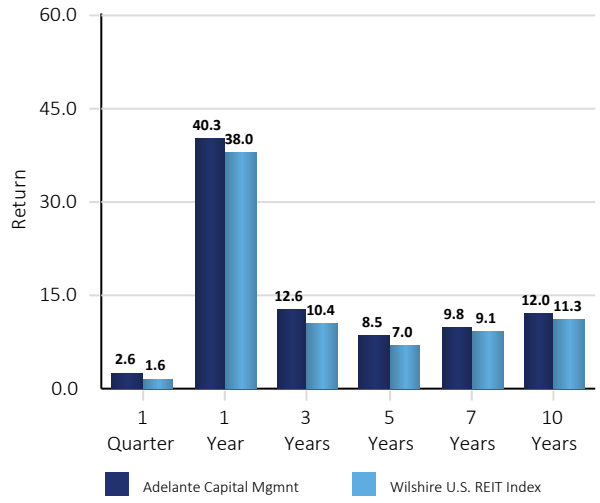


Performance Summary

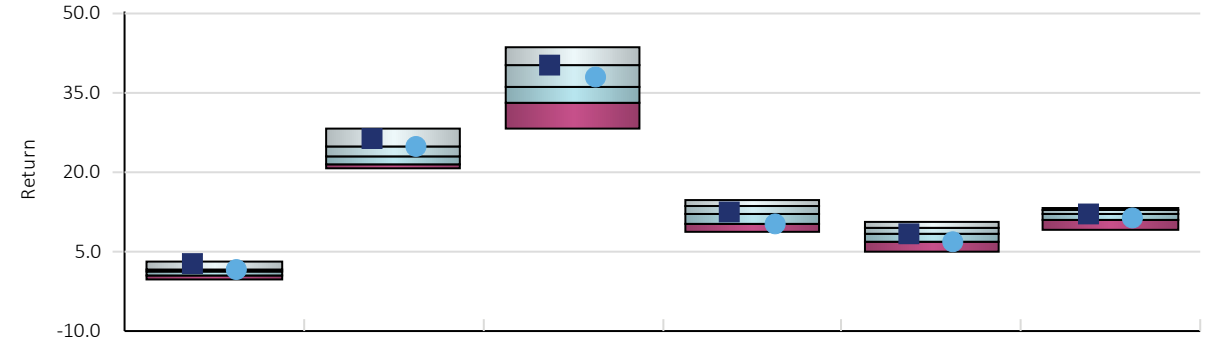
Adelante Capital Mgmnt

Periods Ended September 30, 2021

Comparative Performance

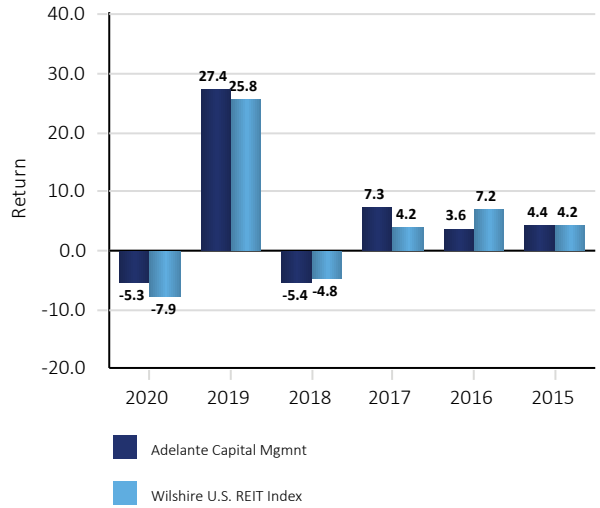


Peer Group Analysis: IM U.S. REIT (SA+CF)

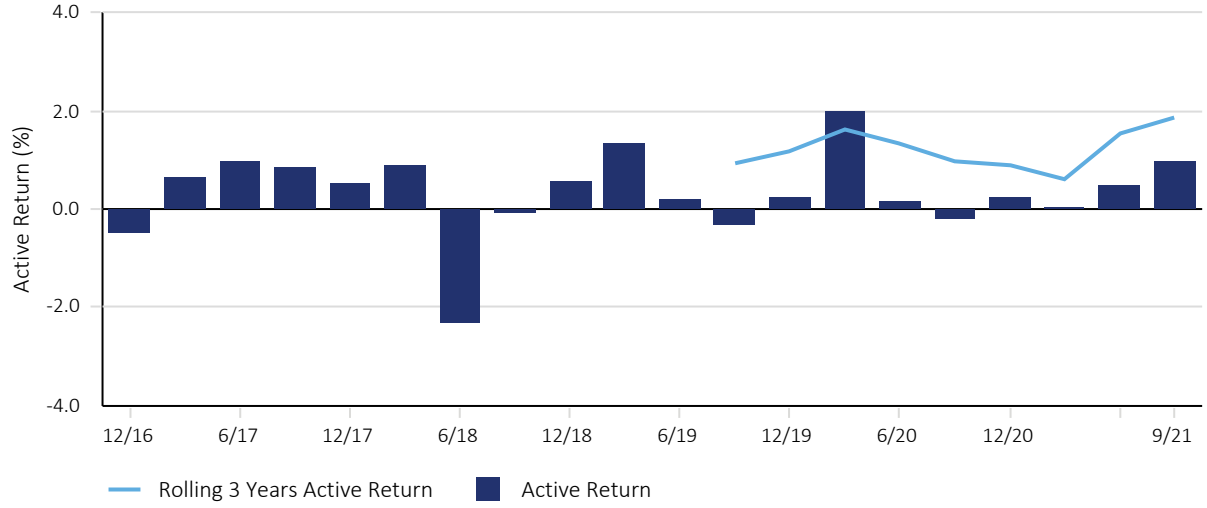


	Quarter	Year To Date	1 Year	3 Years	5 Years	10 Years
Fund	2.60 (11)	26.55 (9)	40.29 (25)	12.64 (46)	8.53 (43)	11.98 (56)
Benchmark	1.64 (21)	24.79 (27)	38.04 (37)	10.39 (76)	6.97 (71)	11.30 (68)
Median	1.16	23.06	36.03	12.09	8.21	12.12

Comparative Performance



Rolling 3 Years Performance

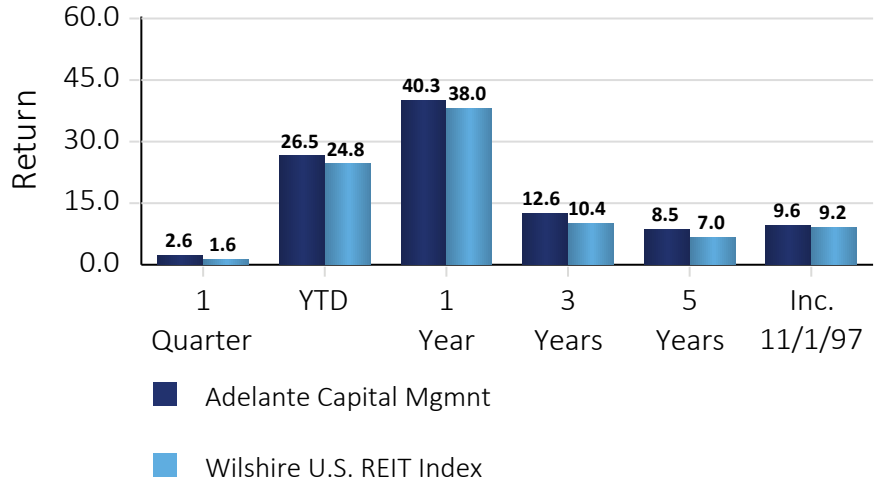


Manager Summary

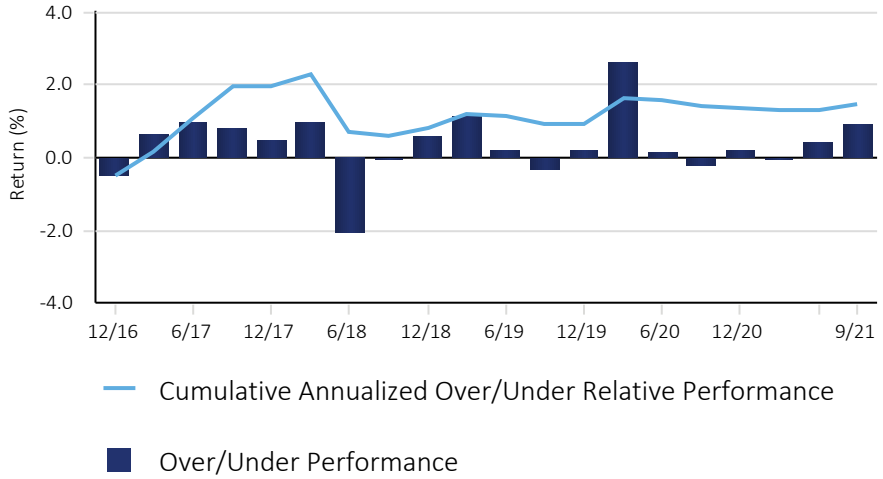
Adelante Capital Mgmnt vs IM U.S. REIT (SA+CF)

Periods Ended September 30, 2021

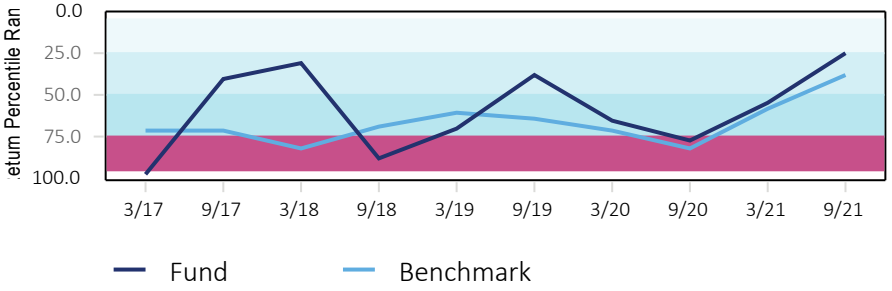
Comparative Performance



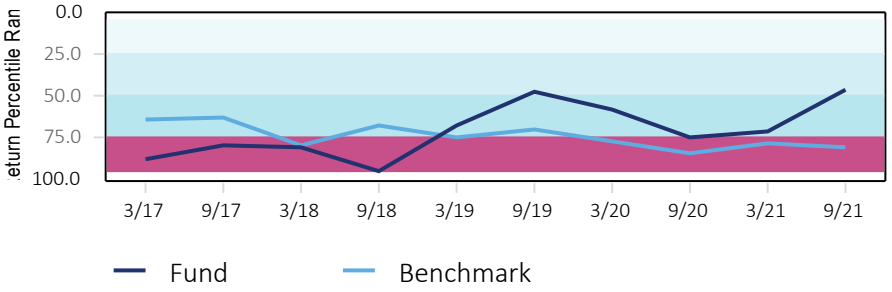
Relative Performance



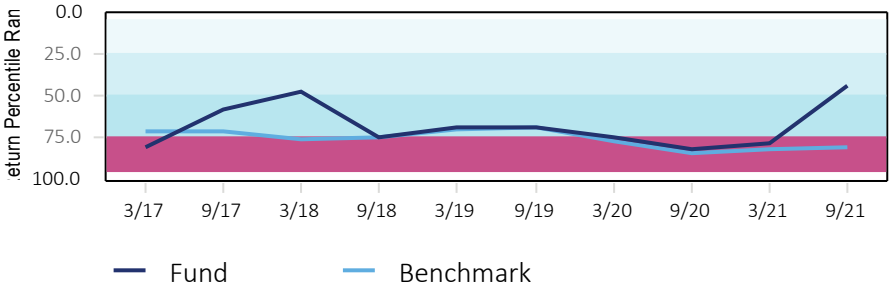
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking



Real Assets Composite Overview

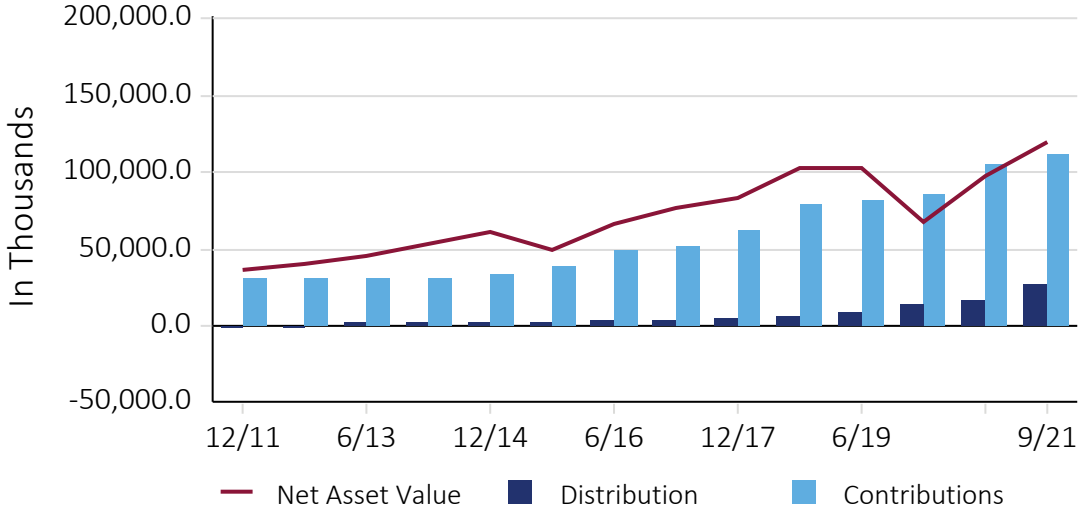
Real Assets Composite

Periods Ended As of September 30, 2021

Cash Flow Summary

Total Contributions:	112,559,404
Total Distributions:	27,509,999
Market Value:	120,091,807
Inception Date:	10/31/2011
Inception IRR:	5.7
TVPI:	1.3

Cash Flow Analysis



Private Equity Portfolio

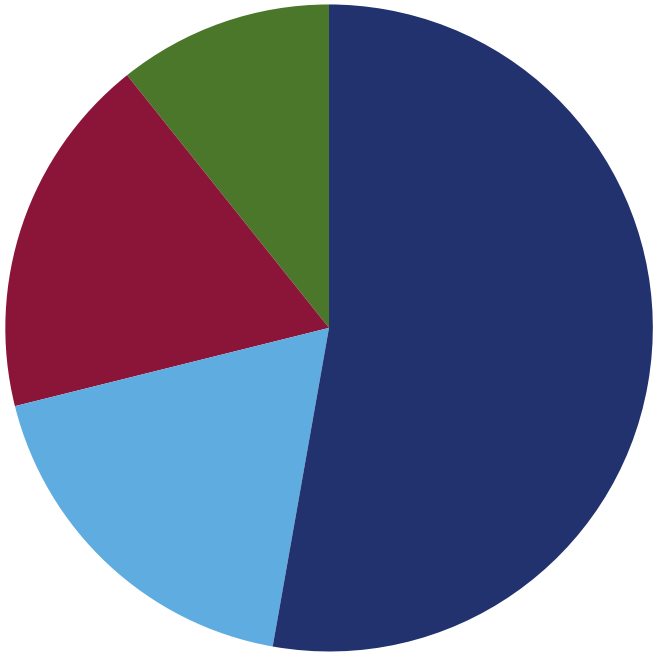
Partnerships	Total Contribution $	Total Distribution $	Market Value $	IRR (%)	TVPI Multiple (%)
Pantheon Global Infrastructure Fund II	25,624,857	17,490,000	22,012,145	12.5	1.5
Pantheon Global Infrastructure Fund III	19,846,905	2,019,999	21,803,243	10.0	1.2
Tortoise MLP	54,744,935	8,000,000	63,391,872	3.8	1.3
Melody Infrastructure	12,342,707		12,884,547	4.5	1.0
Real Assets Composite	112,559,404	27,509,999	120,091,807	5.7	1.3

Asset Allocation By Manager

Real Assets Composite

Periods Ended September 30, 2021

Sep-2021 : 120,091,807

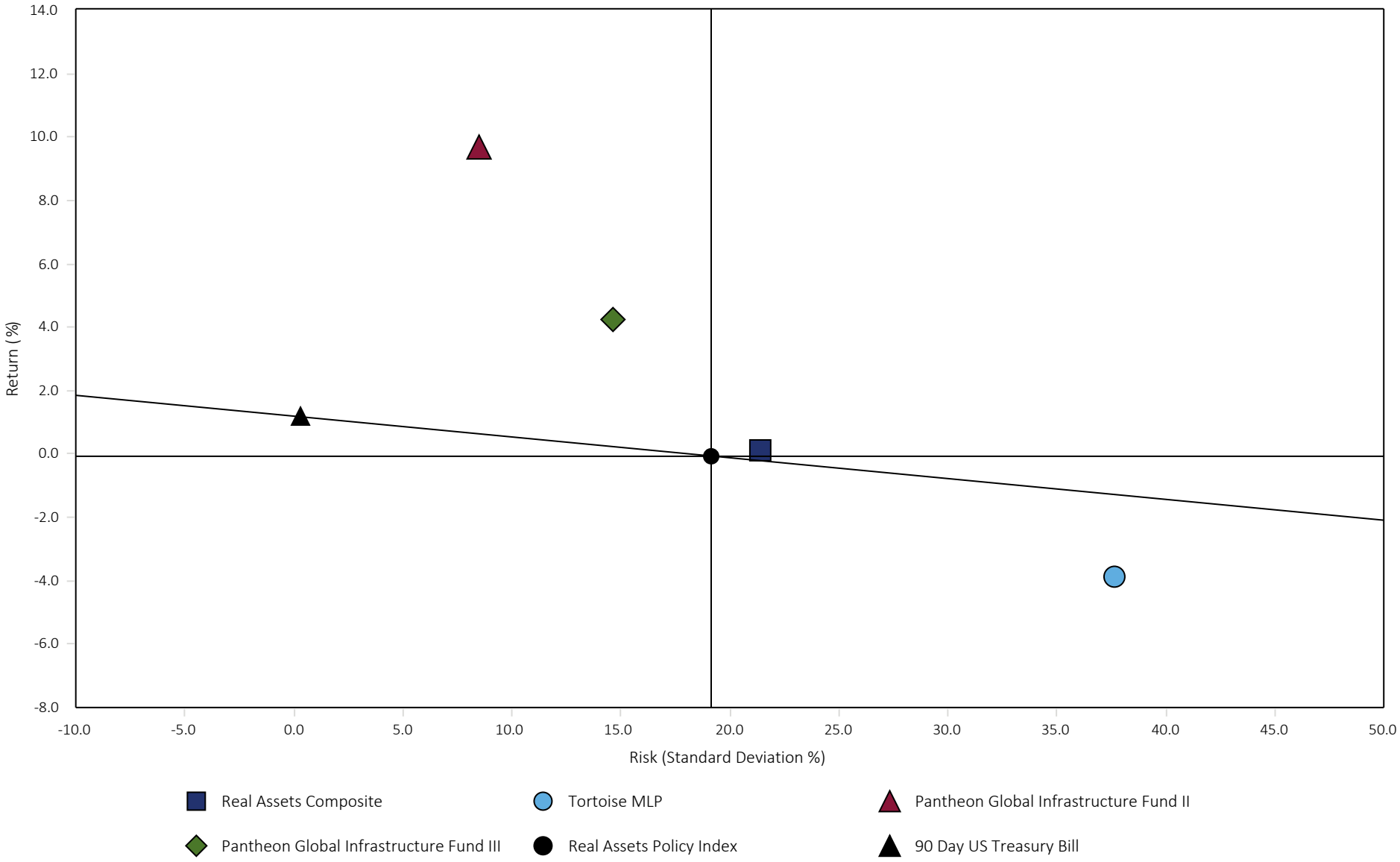


	Market Value $	Allocation (%)
Tortoise MLP	63,391,872	52.8
Pantheon Global Infrastructure Fund II	22,012,145	18.3
Pantheon Global Infrastructure Fund III	21,803,243	18.2
Melody Infrastructure	12,884,547	10.7

Risk vs. Return

Real Assets Composite

Periods Ended 3 Years Ending September 30, 2021



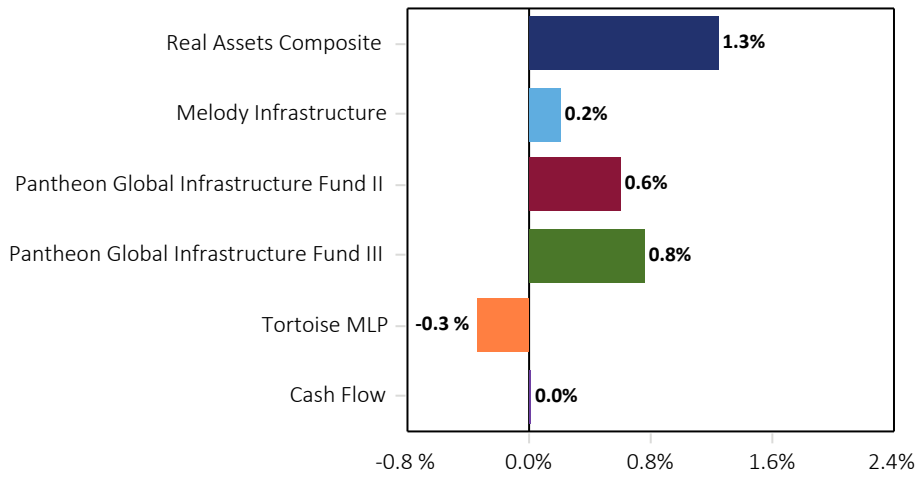
Calculation based on monthly periodicity.

Return and Risk Contribution

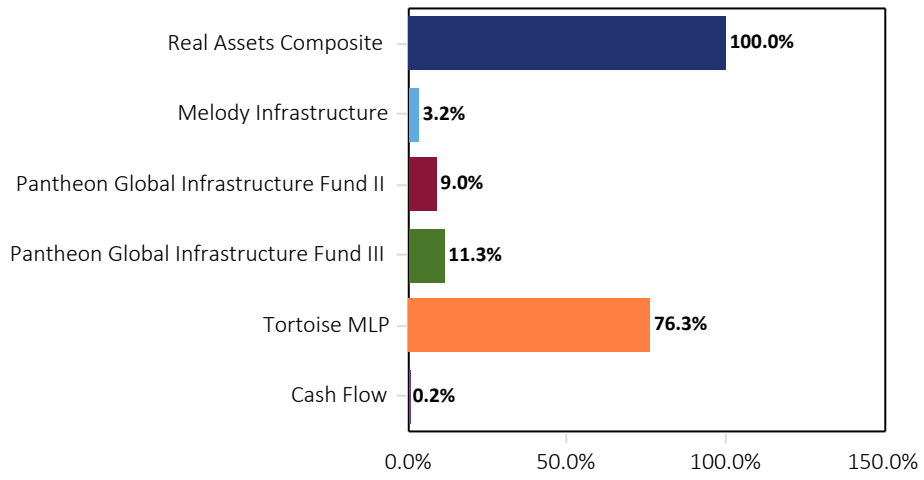
Real Assets Composite

Periods Ended 1 Quarter September 30, 2021

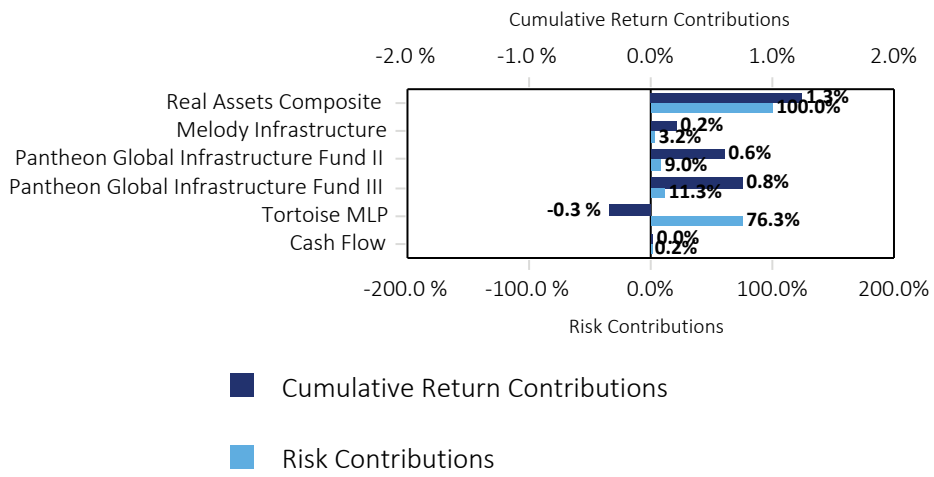
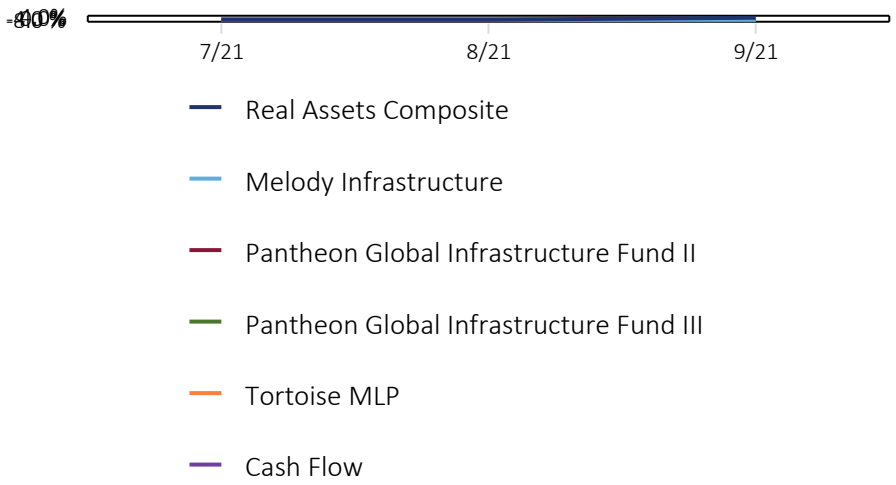
Cumulative Return Contributions



Risk Contributions



Cumulative Return and Risk Contributions



Cumulative Return Contributions History